

*CULTURE AND DRUG ABUSE
IN ASIAN SETTINGS
RESEARCH FOR ACTION*

PROJECT REPORT

TANYA MACHADO
ST. JOHN'S MEDICAL COLLEGE
BANGALORE

SPONSORED BY
INTERNATIONAL GROUP OF RESEARCHERS ON DRUG
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OF
INTERNATIONAL FEDERATION OF CATHOLIC
UNIVERSITIES (IFCU)
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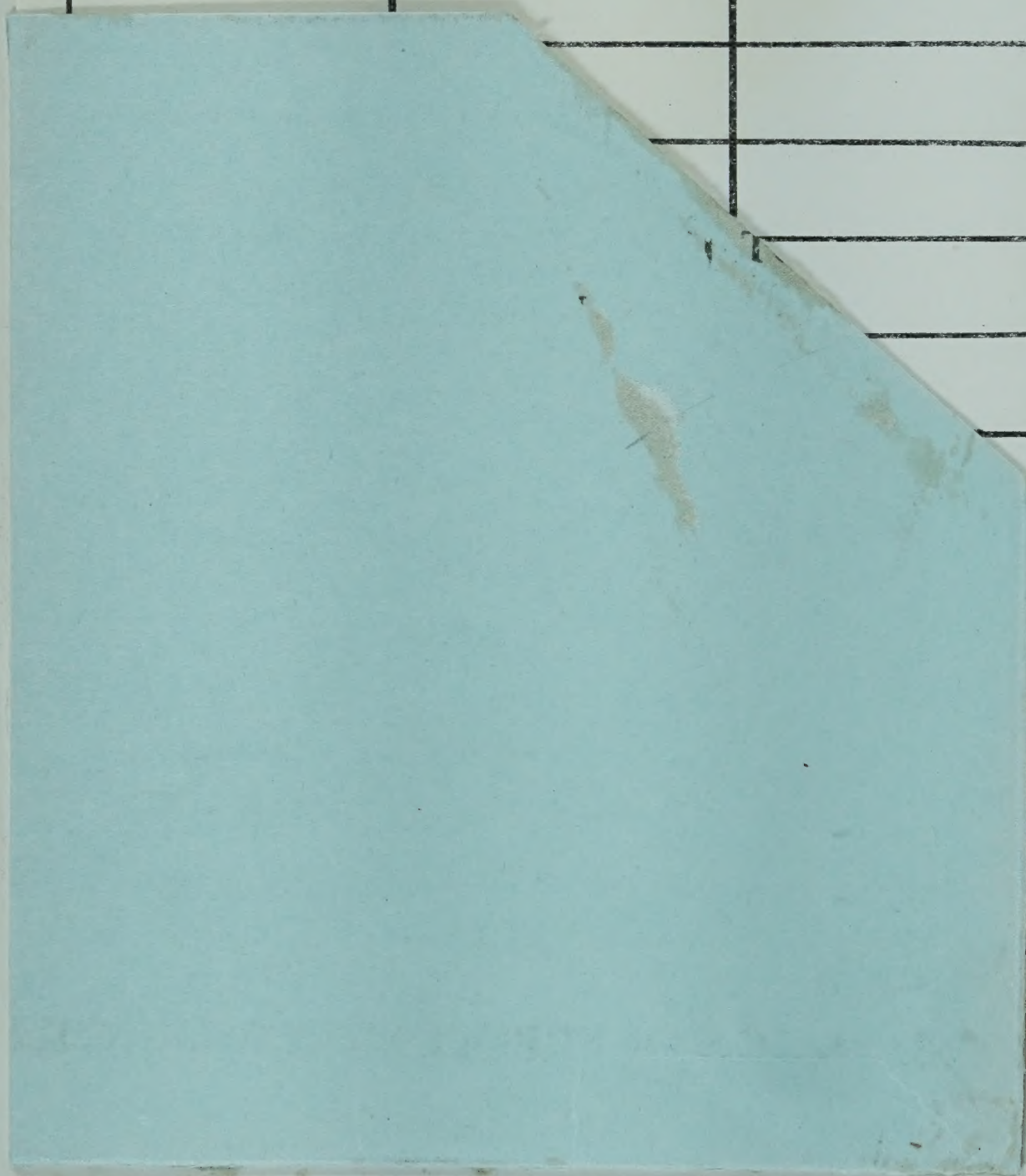
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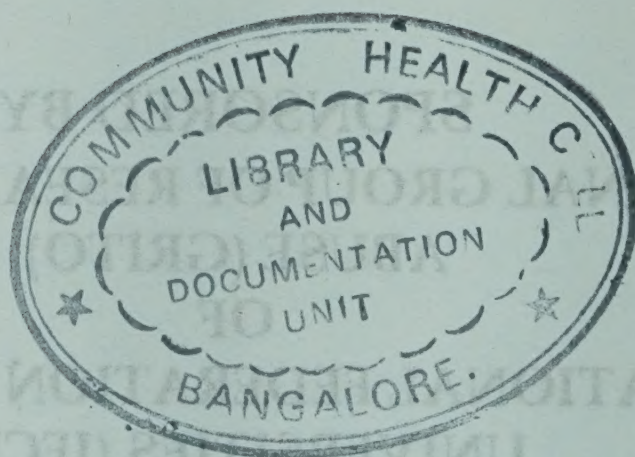
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ABSTRACT

The ubiquity of drug use is an established fact. The escalating large scale abuse of drugs however, is a contemporary phenomenon that has assumed menacing overtones. Understanding what constitutes use and abuse of drugs and the response of the society to drug taking behaviour cannot be divorced from the socio-cultural milieu in which such behaviour occurs. Similarly, any programme aimed at demand reduction should develop from within the cultural context. This philosophy has shaped the present study.

The major objectives of this study were to understand the historical, social and cultural factors related to drug use and abuse in India, to monitor the trends in drug abuse, to determine the epidemiological and social cultural characteristics of drug addicts and to identify and evaluate the existing demand reduction programmes. The goal of such an exercise is to formulate in future, culturally relevant programmes for prevention of drug abuse, rehabilitation of addicts and to develop modules for personnel involved in prevention and intervention.

Using a multidisciplinary approach, information was obtained from as varied and as diverse sources as possible. Techniques employed were a historical, sociocultural study, collation of existing information, interviews with addicts, analysis of case histories (medical records), interviews with key persons such as psychiatrists, counsellors, principals of schools and colleges, wardens of hostels, police, etc. House to house survey were also carried out in a village, slum and an urban area.

An ethnohistorical study reveals that India is a unique example of culturally sanctioned, yet with inbuilt social controls that limited and prevented misuse. But in the 1980s, social, political and economic changes resulted in an upsurge of illicit drug trafficking, increase in drug abuse and drug related crimes in India. An overview of laws related to drug control reveal inadequacies in the law and its enforcement.

Case studies and interviews with addicts reveal that drugs are abused mostly by younger, male, single persons, either student or unemployed. Peer pressure is the major reason initiating youth to drugs and drop out rate from deaddiction programmes is high. The most abused drug in Bangalore is cannabis, but polydrug abuse is also common. Extensive contact with other drug users, lack of religious affiliation, inability to use leisure constructively and easy availability of drugs in Bangalore were the major sustaining factors in drug abuse.

Community surveys using open ended interview schedules yielded rich data regarding community beliefs and practices. The drug users from rural areas were generally older, male, uneducated and employed. Use of drugs was in social gatherings, occasional, limited and was for socio religious reasons. In slums, drug users were younger, unemployed or in unskilled jobs and were given to poly drug abuse. In urban areas, students from affluent backgrounds were the main users. Thus drugs are used variously as social lubricants, as an escape from poverty, hardships and boredom and as a part of socioreligious activities. The psychiatrists interviewed in this study, treated on an average 10-15 addicts per year. Principals and teachers admitted drugs to be a problem but had not faced much of it in their colleges. A majority of police officers interviewed did not consider drug abuse as a priority for them, but opined that the police force is not sufficiently equipped to deal with this problem.

Both formal and informal methods of dealing with drug abuse exist in our culture. Most of the institutionalized formal methods use western models of treating addicts, with little or no attention to the sociocultural ethos. Coming to the issue of prevention of drug abuse, practically everyone emphasized the importance of family and peers in both drug use and its prevention. Awareness programmes, skills training, structured leisure activities, strict enforcement of laws and better rehabilitation and after care facilities are considered as essential.

Drug abuse is a multifactorial phenomenon with individuals using drugs in a variety of ways for a variety of reasons and in a variety of contexts. Any intervention/ prevention programme designed should be sensitive to this socio-cultural reality.

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Freedom Foundation

Hope

Lions Club

National Institute of Mental Health and Neurosciences

Serenity Counselling Centre

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PREFACE

CULTURE AND DRUG ABUSE IN ASIAN SETTINGS - A RESEARCH FOR ACTION is a project proposed by the International Federation of Catholic Universities (IFCU) and funded by the Commission of European Communities (CEC). At its meeting in Vienna in 1987, the United Nations made a strong appeal to various organizations to mobilize a joint action against the scourge of drugs. The IFCU responded to this appeal and created within its organization, The International Group of Research on Drug Abuse (GRITO), with its head quarters in Paris. Since 1987, IFCU has undertaken research on drug abuse, and action programmes in the Latin American countries of Bolivia, Brazil, Columbia and the Dominican Republic. Recognizing the gravity of the problem in Asia, the leaders of the Asian countries, at their meeting in Tokyo in February 1991, recommended setting up programmes on reduction of demand for drugs by preventive education.

IFCU, which represents Catholic Universities all over the world, considers the university environment as a potent resource in social change. IFCU believes in research that has a humanistic outlook, that is rooted in historico-cultural context leading to social preventive action, that carefully analyses the consequences of changes brought about by research action, that is aware of the influences of socio-political forces on action, and finally, research that promotes a pro-life culture through education and training. It proposes an International, Interinstitutional, Interdisciplinary and Inculturated methodological frame of reference. This philosophy motivated GRITO to promote research and action programmes that are culturally and socially adapted to the needs of different Asian countries. India, Taiwan, Indonesia, Pakistan, Philippines and Thailand were selected for this purpose. In India, St. John's Medical College, Bangalore, Stella Maris College, Madras and National Addiction Research Centre, Bombay were the three centres selected to carry out this research.

St. John's Medical College, Bangalore is sponsored by the Catholic Bishop's Conference of India. Started in 1963, it seeks to make a significant contribution to medical education by training dedicated students with high professional standards, leadership qualities and service motivation. The training in this college gives an intensive orientation towards the requirements of community, particularly rural areas and urban slums. With such a background, St. John's Medical College is eminently suited to carry out such a socio-cultural research work on drug abuse.

This project initiated in July 1991, is envisaged in two phases. The first, exploratory phase of two years duration consists of two modules. Module 1 is concerned with diagnosis, and Module 2, with training. In the first phase, culturally relevant information is collected to understand the nature and extent of the drug problem. This information serves as a scientific base for establishing priorities in activities of training and service to the community. The second phase of community service is devoted to implementation of the inculturated programmes for demand reduction. This is the report of the first phase of the work, which contains the conclusions, recommendations and orientations arising from the study which are meant to become actions and services for the local community.

Prof. Dr. Guy-Real Thivierge
Director General GRITO-IFCU
12 January 1994

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INTRODUCTION

The use of psychoactive substances to influence behaviour is not an innovation of the 20th century. There is clear evidence that psychoactive substances were known in almost every corner of the earth from time immemorial (Rubin 1975). They were present in primitive and classical cultures, which moulded our own, and have been found in every environment from the scorched desert to the northern tundra, and from the jungles to the plains. The ubiquity of drug use is so striking that Weil (1972), commented that "it must represent a basic human appetite". He (Weil, 1972), further equated the desire to periodically alter consciousness whether by drugs or some other means to an "innate normal drive analogous to hunger or sexual drive".

Despite all that is written, drugs still remain an enigma. They have been hailed as being of enormous social, medical and religious value and also as the most destructive, pathogenic and misleading discovery of all times. As Blum (1969) observed, "Over centuries, men have sought and drugs have offered - health, relief of pain, security, mystical revelation, eternal life, the approval of the Gods, relaxation, joy, sexuality, restraint, blunting of the senses, escape, ecstasy, stimulation, freedom from fatigue, sleep, fertility, the approval of others, clarity of thought, emotional intensity, self understanding, self improvement, power, wealth, degradation, the life of philosophy, exploitation of others, enjoyment of others, value enhancement and one's own and another's death. Drugs have been employed as tools for achieving perhaps an endless catalogue of motives".

Natural plant hallucinogens were used by primitive man for a variety of reasons, both religious and secular. They permeated all aspects of living and were much more than "mere medicines". They formed an integral part of the religious practices and beliefs. In fact, even today in some primitive and nonliterate societies, drug taking is not casual and frivolous, but it serves a discrete, constructive and necessary purpose.

The recently escalating large scale abuse of drugs in contemporary urban societies is however, very much different from what was prevalent in primitive cultures. In the complex, more advanced, sophisticated, urban contemporary societies, drug taking on a large scale, is a newly imported and superimposed trait without natural roots in cultural history, and without the 'inbuilt' controls for drug taking, prevalent in primitive societies. In primitive cultures, drug taking could be construed as "use", - of sophisticated modern societies, "misuse" or "abuse" (Schultzes 1972). Drug abuse is one of the most daunting problems of our times, a growing scourge that ruins millions of lives

and reaps vast profits used for corruption, intimidation and destabilization of governments. In India, drug use today has reached an alarming proportion and has become a serious public health, socio-economic and a human concern, especially on account of its proliferation among the youth in various socio-economic and cultural milieus.

Drug taking, like every other aspect of human behaviour is deeply embedded in culture. Hence, any study of drug use and abuse cannot be divorced from the cultural and social influences that shape such behaviour. Similarly any constructive response to the problem should take into consideration the socio-cultural milieu in which the response is being planned.

According to Fort (1969), the drug(ged) world serves as a barometer of human society - an indicator of underlying social illness and a warning of existing and approaching storm. Drug abuse poses a serious threat to our society. The International Narcotics Control Strategy (1993), has estimated that there are 1.1 million drug addicts in India today. Drug abuse has invaded the home, the workplace, and educational institutions, affecting individuals of all ages and classes. The damage done to traditional values, life-styles and national economies is tremendous (United Nations, 1989). Unless the demand for drugs is reduced our fight against drug abuse can only be temporary.

This sharpened awareness that we need new culturally relevant knowledge and empirical strategies to fight the menace of drug abuse, has helped to shape the present study. The main aim of the study, "Culture and Drug Abuse", is to elucidate the relationship between culture and drug using behaviour. For, any demand reduction programme that is designed should be based on a realistic appraisal of community needs and cultural reality. To be successful, the programme should respond to cultural beliefs, tradition and social philosophy. Imported technologies and ideas, not adopted to our situation are bound to fail.

To understand the real problem of drug abuse in its true context, we need enormous amount of information. An attempt is made here to gather culturally relevant information regarding the nature and extent of drug use and abuse, beliefs regarding drug use and abuse and its influence on behaviour. This is the first step in designing culturally relevant strategies and programmes to reduce the demand for drugs.

The following section defines and highlights the role of culture in drug use and abuse. An ethnohistorical account of drug use documents the use of cannabis and opium in India through the ages. Successive sections describe the

methodology used and the different types of data collected as well as the implications of the findings. An annotated bibliography of Indian studies related to drug use gives one a glimpse of the extent of the problem and the research interest it has generated (see Appendice 4).

CULTURE, DRUGS AND DRUG ABUSE

Defining culture, and drug abuse

In order to understand the complex role culture plays in different aspects of drug use and abuse, it is important to define the term culture. More than 200 definitions have been compiled by Heath (1986), and there is little agreement on a commonly accepted or universal definition. One of the earliest definitions of culture was by Tylor (1871), who defined it as a "complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society".

The more recent definitions of culture have included constructs such as norms - the shared rules that specify appropriate behaviour (Berne 1964), mores - the norms that people consider vital to their well being and to their most cherished values (Bellah et al, 1985) and sanctions - the socially imposed rewards and punishments that compel people to comply with norms (Light and Keller, 1985). Orlandi (1992), defines culture as the shared values, norms, traditions, customs, arts, history, folklore and institutions of a group of people.

Each generation passes on its cultural beliefs, mores, values and folkways as the society's heritage and sacred knowledge. The cultural information is in the form of basic values and beliefs, ideas about family, religion, etc. The society emphasizes the 'unique appropriateness of its particular culture. The developmental experiences of being socialized through ones family and cultural definition, is what it is to be a member of ones society.

A group's shared norms, beliefs and expectations regarding psychoactive substances and its effects shape not only the group members' drug taking behaviour per se, but also the ways in which the members behave while taking drugs, and their perceptions of personal and collective responsibility for the outcomes of drug taking. In this way, both the endogenous characteristics of such a group and the behavioural manifestations of these characteristics are directly influenced by culture. Analogously, and over time, a culture is in turn influenced by the characteristics of the group and its behaviours. Similarly, the environment in which behaviours occurs is both a manifestation and a determinant of the cultures that compose it (Orlandi 1992). Drug use in the context of culture can be understood and studied by answering two questions.

(1) What is the purpose or meaning of this behaviour (drug taking) in this particular society?

(2) What is its' function?

The terms "drugs", and "drug abuse" are also subjected to definitional confusion. Drugs tend to resist brief simplification. There is confusion surrounding exactly what is and what is not a drug. The word drug has such a wide applicability as to make it virtually meaningless in either a practical or a definitional sense and in fact it may be used to refer to a whole host of perfectly innocuous and common place domestic materials. Many people simply do not identify as drugs such widely used licit substances as coffee, tea, alcohol and tobacco. One man's beverage is another man's drug, one country's drug is another country's medication, and one agency's subsidized crop is another bureau's focus for criminal law enforcement (Fort 1969). Hence the definition of the term "drug" is a product of the social custom and law, both of which change over time (Smith 1970). WHO (1983), defines a drug as "Any substance that when taken into the living organism, may modify one or more of its functions (WHO, Tech rep. Series No. 73). The Canadian Government Commission of Inquiry (1970), defines a drug as a substance with psychotropic properties, as defined by their capacity to alter sensation, mood, consciousness or other psychological or behavioural functions."

Even more confusing is the distinction between "use" and "abuse". Most views hold that drug abuse is dangerous or unacceptable and therefore requires formal legislative controls. However, abuse is a highly relative unstandard concept, meaning different things to different peoples. (Austin 1978). Wolman (1977), describes drug abuse as a "set of behaviours characterized by self administration of any intoxicating substance in a manner that deviates from approved medical or social patterns". Drug abuse according to WHO, (1983), is the "Use of drugs which is viewed as a problem to society concerned". The society's view is based on its assessment of the physical, mental and social harm caused by the use of a drug or on ethical or religious dis-approval. Deviance from the norm is another criterion. Fort (1969), defines drug abuse or missuse as (regular, excessive) use of a drug to the extent that it is damaging to a person's social or vocational adjustment or to his health, or is otherwise specifically detrimental to society". Distorting and dominating the scientific concept of drug abuse is the reality that in all countries any use or possession of some drugs is a criminal offense, thus making by statute any detected "use" an "abuse" (Fort 1969).

Most opinions hold dangerous or unacceptable use as abuse but few concur on what that degree of unacceptable use is. To many, it refers only to illicit drugs, or to the use of any drug without professional medical supervision,

or for non medical purposes (Austin 1978).

The concepts of "use" and "abuse" in society have been moreover very fluid. For eg, alcohol was praised as one of the 'Good creatures of God', when used in moderation and this distinction became blurred in the mid 19th century, as many attacked any use of "demon rum" as an abuse which had to be prohibited. Attitudes toward opium use underwent a similar change around the turn of the 20th century. The social concerns over "abuse", have not always required that any ill effects from drugs be demonstrated and that the assessment of "badness" be demonstrated. The assessment of "badness" of drug use often depends less on consideration for individual or social health based on the actual pharmaco-logical effects of a drug than on tangential and arbitrary political, economic and moral concerns (Austin 1978). There is great inconsistency about judgement of ill effects from various mind-altering drugs over time and from place. For example, in the 17th century, death penalty was prescribed for drinking coffee. The differing social evaluations of drug behaviour must be found in the times themselves and not in the pharmacological action of drug (Blum 1969).

The common component of all definitions is the element of societal disapproval. Einstein and Gar (1972) define "Drug abuse as behaviour, designated by professional and other community representatives, describing the use of particular reasons which are contrary to the agreed upon rituals in a given community at a given point of time". Hence, in its most general sense, drug abuse is the continued use of psychoactive substances despite the occurrence of major problems associated with its use, for example, health, vocational, scholastic, legal, social or economic difficulties. According to this view, abuse occurs when the user's functioning is deleteriously affected in one or more respects (Smith 1970).

Cultural factors in drug use and abuse

The promiscuous use of drugs in contemporary urban societies has been related to some fundamental aspects of our culture. The idea is not entirely new. Thomas de Quincey, author of the "Confessions of an Opium Eater" and himself an opium addict, in 1845 predicted the psychological effects of industrial urban society and related them to the use of drugs. In "Suspira de Profundis", he predicted "the fierce condition of eternal hurry.....(is) likely to defeat the grandeur which is latent in all men", and further stated that without sufficient opportunity for solitude and reverie, man loses his capacity to dream splendidly, without it man lacks the means to invest his life with meaning and enhance his experiences by the creative forces of his imagination. Eric Fromm (1956), held

that people are brought up to desire and value the kind of behaviour required by their economic and social systems. But the social and economic requirements of our society have undergone a radical change in the past few decades. Modern society is in a state of transition and the transition is not without its untoward consequences in terms of stability.

Major socio-cultural changes in India, in the wake of industrialization, have made people more receptive to the adoption of innovative drug use. Rapid technological advances in science and communication has led to tremendous amount of change in the social and cultural fields. This has resulted in rejection of traditional values, and an inclination towards consumerism, permissiveness and adoption of western lifestyles. With the joint families becoming relatively obsolete, the family has lost its bonding and strength. Also with religion losing its hold on people, the philosophy of life has become materialistic, with more than a touch of hedonism. Further, migration from rural areas has led to a proliferation of slums, with the result that people are exposed to a variety of social and health risks, such as long periods of unemployment, psychological stress, poor physical health, and lack of fulfilling leisure time activities. Because of migration, they lack the support of the family and friends in dealing with these problems.

In one sense, the current drug use could be seen as a reflection of the cultural lag with all of the consequent conflict of wishes and values that result from the lack of good correspondence between traditional teachings and the view of the world as it is now perceived by a large number within the society.

Life today has become increasingly urbanized in the wake of rapid development in science and technology, facilitating the quick spread of drug using behaviours. Previously, different drug using customs of separate peoples were kept intact by geographic isolation and therefore drug use was able to be limited by customary social and religious controls. Technological developments have further helped to exacerbate the problem of drug use by making substances easily available, pleasant to consume and less expensive.

It has been pointed out, that, cultures which are highly traditional or ritualized do not easily accept innovations without external pressure. The more complex, secular, and free a society is, the more likely it is that more drugs will be used in more ways within it, and the more heterogenous the drug use becomes, the more the conflicting evaluations in regard to it multiply (Blum 1969).

Further, the cyclicism in drug use has been related to periods of cultural

stress, when certain sections of populations tend to increase the use of drugs. Almost all great drug crises have occurred when a new drug was introduced into a society, and there were neither familiarity with, nor established social controls over its use or when existing controls were disrupted among a particular group (Blum 1969). Hence, it could be assumed that drug use or abuse has always been functional (Khalifa 1975). This supposition could be sustained by the concept of anomie advanced by Durkheim (1954), who maintained that people who are denied access to the goals society values, who are given little or no opportunity to achieve these goals, may withdraw and retreat from these goals and resort to deviant substitute activities such as drug use. According to Chakraborty (1993), in India, with an ancient culture, which encourages escapism and cynicism, the frustrated youth normally falls into a retreatist subculture with drug abuse.

Sigg (1960) has put forward the view that the use of psychoactive substances is related to the socio-economic condition of the person. Sigg (1960), considers the concept of alienation originated by Hegel, and emphasized by Marx, as a sense of estrangement or dispossession of not being able to enjoy the essence of human work. When man has no work, or his work does not belong to him, Sigg proposes that man is alienated generally from family and community, and from strong interpersonal ties of any kind. What is left is only imaginary - the world of dreams, and drugs are part of that world. To support his thesis, he cites the example of Cuba, where under Batista, there was a high use of cannabis, and now, under Castro, it is free of such practices (Sigg 1966).

Fort (1965), contended that if there are traditions of medical and holy use, if the behaviour engendered is socially acceptable and even desired, if the personal experiences are compatible with the cultural values and expectations, if there may in fact be personal gains in terms of euphoria or relief of fatigue, and if further there is an economic apparatus for production and distribution upon which persons depend for their livelihood, then endeavours to control drugs will be faced with massive resistance, for its use itself will be widespread.

The aspects of drug abuse are so widely diversified, that to achieve any understanding or insight, the problem should be studied within its cultural context. A cross cultural approach is indispensable to determine and interpret the epidemiological characteristics of a given drug in any given society and to identify the rationale behind its incidence. Against so many different socio-cultural back-grounds, one must expect to find dissimilarities and differences in the underlying values and manifestations involved.

Murphy (1963), recognized that cultural features may dictate who may or

may not use drugs, and that use ordinarily conforms to other demands of role behaviour or interpersonal action. Benbud (1956), Carstairs (1954) and Murphy (1963), put forward the thesis of cultural conditioning in the choice of drugs. When a culture fosters action and aggressiveness, then cannabis which produces passivity, will be renounced and alcohol or perhaps amphetamines accepted. When a culture values calm, interpersonal inaction, cannabis in controlled or ritual use may be incorporated into acceptable conduct.

The ethnic specificity theory claims that Asians use opiates to satisfy their need for contemplation and passivity, that Africans use cannabis because of a need for fantasy and group experience, and that North Americans and Europeans use alcohol as a euphoriant because of their need for aggression, action and extraversion (Fort, 1969).

Similarly, Carstairs (1954), put forward cultural reasons which lead people to prefer one drug to another, especially alcohol versus cannabis. Westerners, according to him (Carstairs 1954), are extremely unlikely to turn from alcohol to drugs, such as cannabis, as their effects do not accord with their value systems. He also held that in India, the choice of intoxicants is dependent on the caste or varna, with the lower caste choosing dharu (alcohol) and the twice born (Brahmins) preferring bhang (cannabis). The psychological effects and associations and the different values and attitudes of the two groups are all shown to be involved in explaining the differences in choice. The drug of choice of the Chinese is opium as opposed to cannabis. The Chinese traditional philosophy, which is centred on humanism emphasizes interpersonal relations with its strong system based on the family, rejects the use of a drug like cannabis which causes "hallucinations, and fantasy", as this would disrupt the family life. On the other hand, the sedative effect of opium is more compatible, especially in view of the large size family, where several generations live together. Opium encouraged by the elders in the younger generation who were eager to keep the family and its fortunes intact (Hui-Lin Li, 1975). Similarly, Hsu (1955), hypothesized that, the Chinese, because of their way of life will choose narcotics rather than alcohol and other stimulants. The situation-centered Chinese way of life directs the individual to seek harmony with the environment, finds more satisfaction in drugs like opium which enables a person to retreat into a state where conflict with the environment is reduced further and the likelihood of giving vent to individual whims is even more remote. The individual centred Americans whose way of life is aggressive and uncompromising, are attracted to drugs or intoxicants which aggravate their tendency to follow personal predilections and the extreme of which is completely unrestrained freedom (Hsu 1955).

OBJECTIVES AND METHODOLOGY OF THE PRESENT STUDY

The problem of drug abuse is a multifaceted one and it is increasingly being recognized that social circumstances and social changes and not simply individual choice are among the causes of drug abuse. The different pattern of drug using/abusing behaviour in different cultures, moreover has made it imperative, that in order to respond constructively to this problem, it is important to identify different patterns of drug use/abuse in order to develop appropriate responses for different patterns of abuse. Hence it is important to examine the many influences in society that have a bearing on drug taking. Any demand reduction programme, which ignores the social and cultural milieu of the drug user, ignores both the forces that might support it and ranges of influences that may be working against it. Hence development of an appropriate response to the drug problem, requires an understanding of the specific society, its' history, its' culture and its' dynamics.

Social issues surrounding the use and abuse of drugs are important ones which illuminate a number of social problems and value conflicts within our society. The positions on drug issues are part of a larger fabric of a person's outlook, one in which moral values, psychological characteristics and social and cultural surroundings play a determining role.

The legal status of drugs, their sources of supply, their availability and costs, their economic importance, the extent to which they are accessible to the population, socially accepted views about their use, the role drug habits play as an established response to collective problem and the social function they fulfill- are important social and cultural factors that affect drug abuse.

Keeping in mind the above factors, the present study has been carried out. The focus here is on only illicit drugs. Alcohol and tobacco use have not been considered in this study. Given below are the broad objectives of the study.

Objectives of the Study

Broad objective: To elucidate the relationship between culture and drug abuse in order to develop/formulate an appropriate culturally relevant response to it.

Specific Objectives:

1. To understand the historical, social and cultural factors related to drug use and abuse.

2. To monitor the trends in drug abuse patterns.
3. To determine the epidemiological and socio-cultural characteristics of drug use including drug abuse in specific social groups.
4. To identify personal and situational characteristics of different types of drug abusers.
5. To assess the social, economic and health consequences of drug abuse.
6. To identify and describe the groups at risk.
7. To get information regarding the course of addiction.
8. To list and evaluate available demand reduction programmes.
9. To formulate culturally relevant programmes for prevention, training and rehabilitation of drug abusers.

Methodology

In order to obtain a comprehensive view of the drug problem, several complementary or convergent approaches were used. This was done as any one technique could not be relied upon to provide a complete picture of the multifaceted drug problem.

Quantitative data collection has been complemented with ethnographic approaches about different aspects of drug abuse. A wide variety of information both primary and secondary was collected from:

(1) directly affected persons (2) indirectly affected persons (3) support / interested members from area and community (4) key informants. The qualitative aspects of the environment of drug abuse has been specially emphasized. Both micro and macro environmental factors have been taken into consideration.

Techniques employed for information collection

1. A historical, social and cultural study.
2. Collation of existing information.
3. Analysis of case histories.
4. Interviews with addicts.
5. Key informant survey.
6. House to house community survey.
7. Evaluation of demand reduction services.

A HISTORICAL SOCIAL CULTURAL STUDY

Drug using behaviour is a dynamic, multifaceted phenomenon which is constantly changing and hence has to be understood in the historical and sociocultural context in which it occurs. In order to define the drug problem in its true context, an attempt has been made to trace the historical antecedents of drugs and their problems in respect of cultivation, production, consumption and traffic. Further, an attempt has also been made to trace the spread of drug use and the corresponding response of the society and the government to it. Relevant literature and information has been collected from different sources, such as historians, sociologists, botanists, practitioners of indigenous medicine, law enforcement agencies and library sources.

A historical perspective helps us in understanding how drugs came to be adopted for use, in what ways and by what groups of people, under what conditions and circumstances drug use was reduced or constraints placed upon its use, and how drug use has been affected by past social responses, public opinion and laws (Blum 1969 and Austin 1978). By allowing the experiences of the past to inform the present, we are able to view the contemporary phenomenon in our society from a better perspective, which gives a more realistic understanding of the dynamics of drug use.

In analysis of drug history, we are admittedly limited by lack of data and difficulties in interpreting what data are available. In fact, the very first point which should be made concerns the doubtful validity of the historical records, for apart from questions of the credibility of the narrative, there is the uncertainty that, the drugs described in ancient accounts are the same ones that are being used today. (Wells 1973). This point can be illustrated with the case of the Soma plant. Scholars have variously identified it as Ephedra (Watts 1889; Madhihasan 1987), Cannabis, (Flaherty 1971; Basham 1961), and Amanita Muscaria, (Wasson 1971). It is also interesting to note that some scholars believe that soma was not a plant at all, but that it signified the moon!

There is also the problem that some of the very old sources could be legendary rather than historical. The absence of artifacts, documents and objects makes the scarce data in the written literature reduced to inferences in history (Blum 1969). This is particularly true for the period before the 16th century. While we may have evidence that a drug was known in a society, we often have no evidence regarding what was known about it, the extent to which it was used, and how and why it was used, whether it was for ritual, medicinal or recreational purposes. In assessing attitudes towards drugs, we are primarily limited to literary records, which are generally products of the elite and

therefore not necessarily reflective of popular attitudes (Austin 1978).

Despite the limitations, much of the presently available data of history of drug use is a rich mine of information. As Barry (1968), emphasized, the comparison of different time periods in the same society approximates the powerful experimental method of measuring the effect of change in one condition while holding other conditions constant. Inevitably, technological developments and improvements in transportation and communication will continue to make new more potent drugs available. The more we learn about the factors which have generated and conditioned the impact of innovative drug use in the past, the better equipped we will be to deal with such innovations in the future (Austin 1978).

A Historical Perspective of Drug Use in India

India has a long and varied history of drug use. The habitual use of stimulants, sedative and euphoric drugs was prevalent in India long before any other country of the modern world. There are indications that drugs were used thousands of years ago and were an essential part of the early Indian religious ceremonies. Historically speaking, cannabis and opium were the most commonly employed drugs, of use and abuse. Hence, the history of drug use in India, is mainly concerned with the use of cannabis and opium.

The Use of Soma

The Aryans who invaded India from the North West about 1300 BC or earlier were said to have brought with them religious concepts consisting mainly of a pantheon of materialistic or functional gods, a ritualistic cult involving the sacrificial use of fire and an exhilarating drink called the 'Soma' (Lader 1983). Cult practices developed an elaborate ritual based on a fire sacrifice personified as Lord Agni and included the production of the Soma juice (Somaras) deified as God Soma from an unidentified plant. The Aryans composed thousands of hymns extolling the virtues of the mystic plant brought from some mountains mainly Maujavantha (Om Prakash 1961). In the Rig Vedic hymns, Soma was welcomed as a friend to many, bringing joy and gladness. It instilled courage, power and strength, clarified the mind, inspired speech, cured illness, struck down the wicked, with it, and men could commune with the gods (MacDonell 1983).

"We have drunk the Soma, and become immortal!

We have attained the light, we have found the Gods!

What can the malice of mortal man

or his spite, O immortal, do to us now?" Rigveda Book VIII, 48 (Panikar 1977).

The Gods were supposed to be inordinately fond of it and the effects stimulated and enabled them to perform exploits of prodigious strength and valour.

Soma was considered to be the favourite drink of Lord Indra. He is supposed to have transformed himself into a falcon and stolen the plant from heaven for it could not be had for the mere asking. Soma was worshiped as God Soma next only to Agni, the fire god. The fire ceremony 'Haoma' was named after Soma (Haoma/Soma) and not after Agni though, the fire was the object of worship (Mahdihasan 1975).

Detailed descriptions are given in the Rigveda about preparation of the Somaras. Soma was brought to the sacrificial hall, often in a cart load. The stalks were crushed between two stones. They were sometimes pounded in a mortar with a pestle. Before crushing, the plant was washed in water. In order that it may yield copious juice, water was sprinkled on the stalks. It was pounded with both hands. Women sang songs, when they squeezed the juice of the plant with their fingers (Om Prakash 1969).

Soma juice was pressed in large quantities and strained through a piece of woollen cloth or through a wad of wool for removing impurities. It was stored in jars or wooden tubs, the 'dronakalasa', and was either brown, ruddy or tawny. The juice was to be drunk fresh and was often mixed with curds, clarified butter or milk and honey, to improve its taste. Other preparations with which it was mixed were, 'Karambha', 'Dhaniah', 'Apeepa', 'Pakhi', 'Saktu', water and honey. It was called pure, purifying and the most heavenly nectar. A strong mixture of Soma juice called 'Pancadasa' is also mentioned. While the use of Soma juice was strongly recommended, that of 'Sura' (alcohol) was condemned (Om Prakash 1969).

In the Vedic period; the Dharmasutras, the literature dealing with the interaction between religion and society, regarded drinking as a heinous crime and forbade the use of liquor particularly to Brahmanas and students, but not Soma. Dharmasutras recommended the branding of foreheads of the Brahmanas who drank sura, with a sign of a sura pot and condemned them to exile. The Harsacarita also referred to the cultivation of Soma plant and it is probable that Brahmans may have used soma juice as a beverage (Om Prakash, 1969).

During the Sutra period, Soma juice continued to be used in Srauta rites but not in domestic rites. It probably means that it was no longer a common drink. The scarcity of the plant may have been one of the reasons as 'Adera', a substitute is mentioned in the 'Apastamba- Srauta (Sutra, XIV 12-13.

Om Prakash, 1969).

Soma played an important part in the erotic tradition of Hinduism (Wells, 1973). It has been poetically referred to as "Soma's Golden Phallus" (Rig Veda, 1V, 58).

As the Aryans moved South they abandoned the use of Soma. Many suggestions have been made regarding the identity of Soma including millet, rhubarb, *Amanita muscaria* (Wasson 1971), Ephedra, (Watt 1889, Mahdihasan 1987), Cannabis (O'Flaherty, 1971, Basham 1961).

CANNABIS

History of Cannabis Use

Cannabis Use In Ancient India

Cannabis has been used in India for thousands of years and was an essential part of early Indian religious ceremonies. In the Atharvaveda, "Bhanga" is mentioned as the "sacred grass" (Spellman, cited in Blum, 1969). "Bhanga" is also mentioned in the Susruta (Ingalls 1967). Rosevar (1967) claimed that the use of cannabis was known between 2000-1400 B.C. and was brought to India by Iranians.

Early Indian use of Cannabis was mainly religious. The collection of resin from the plants is described in early writings. After fasting and purification, men would run naked through the cannabis fields. The clinging resin was scraped off their bodies and cakes were made from it and used in feasts. Early legends hold that "the angel of mankind" lived in it (Fort 1969).

Cannabis Use During Moghul Period

Later Indian use of cannabis included medicinal and social components besides religious. Babur (1505 AD) the first of the Moguls described how he would sometimes mix tincture of hemp and opium. He also ate hemp sweetmeats and when taking hemp, abjured alcohol (Lamb 1961). During the Moghul period, it was grown extensively, and its preparations were manufactured throughout the country without restrictions (Mitra 1955).

Cannabis Use During British Period

Cannabis was grown and used extensively till 1881, when an Act was

passed restricting the use of these drugs. The British Government appointed The Hemp Commission, in 1893 to enquire into the question of cannabis use and its deleterious effects. The Hemp Commission found no evidence of mental or moral injury or disease arising from moderate use and stated that such use produced the same effects as a moderate intake of whisky. On the recommendation of this commission, Act XII 1893 was passed empowering the Government to exercise absolute control on the cultivation of the plant and the preparation, export and transport of drugs thereafter. With reference to Ganja and Charas, the following policy guidelines were laid down (1) The cultivation of the cannabis plants in British India for the preparation of these drugs, should be restricted as soon as possible, the production of Ganja and the import of Charas being, however, permitted under proper control and restrictions (2) That production of Ganja and Charas or import into any state be liable to a direct quantitative duty, such duty being paid on issue for consumption from the bonded warehouses where the drugs were to be stored but to remain the property of the cultivators, dealers or importers and (3) That the drugs should be allowed to be freely carried under suitable restrictions but without payment of duty from one warehouse to another within the same or into another province, the duty being realised therefrom on issue from the warehouses on retail sale in the provinces of consumption (Rao 1993).

No attempt was made to extirpate the spontaneous and wild growth of cannabis which in any case would have been impossible because of the vastness of the wild plants in some states or its cultivation for the manufacture of fibre. The collection of "Bhang" from wild or self grown plants by wholesale and retail vendors for the purpose of sale was only permitted under license in Punjab and Uttar Pradesh and the transport of Bhang so collected was carefully regulated and restricted. Strict vigilance was extended to the states where licit cultivation of cannabis was permitted.

Cannabis Use in Post Independent India

The policy of the Government of India, after independence as regards cannabis was the same as that of opium. Prohibition of Ganja and Bhang appeared on the agenda of the All India Narcotics Conference, 1956 and 1959. The official statement of the stand taken by the Central Government was that though these drugs were not as deleterious in their effects as opium, they must sooner or later be prohibited, and it had to be sooner than later. This was done because international opinion was against the use of hemp drugs, and also because of the opposition to it by the educated in the country. It was resolved by the Conference that non medical use of Ganja and Bhang should be totally prohibited throughout the country by the 31st March, 1959 and 31st March,

1961, respectively. However, since it was proved to be impracticable, it was resolved that the area under cultivation should be restricted to minimum requirements of Ganja and limits of individual possession should be fixed at a very low level (23gms). India ratified the Single Convention on Narcotic Drugs in 1964 and thus committed herself internationally for a total prohibition of non medical use of cannabis drugs. However, on account of practical considerations, a reservation was entered under article 49 of the Convention in accordance with which the licit cultivation of cannabis, (Ganja), was required to be terminated by the year 1989.

Botanical Characteristics of Cannabis

There is no agreement among botanists as to where the plant originally grew wild and where its cultivation first began. Estimates range within the wide span of temperate Asia from the Caucasus Mountains and the Caspian sea through Western and Central Asia to Eastern Asia. Carlous Linnaeus, a Swedish botonist, classified the herb as *Cannabis Sativa*, in 1753 (Emboden 1972). Most botanists, consider the genus as monotypic (*sativa*) and the other variants (*indica*, *americana* and *africana*) as belonging to the same species, whereas others propound a polytypic concept of the genu, with three distinct species, *Cannabis Sativa*, *Cannabis Indica* and *Cannabis Ruderalis* (Schultzes 1972). *Indica* is found in India, and grows wild all over the Himalayas. *Indica* is considered to have the most potent resin, but climate, soil and selective plant breeding, all influence its potency. Today it grows almost all around the country in a wide variety of climates and physical environments, ranging from the hills to the plains. *Cannabis* is an annual, 4-16 feet tall, with errect regular stem bearing palmately divided leaves. The plant is dioecious, and after the male plant releases its pollen, it usually dies. When the cultivated plant is fully ripe, a sticky golden yellow resin with minty fragrance covers its flower clusters and top leaves. A number of psychoactive properties in the resin have been identified. They are cannabinal, cannabidiol, cannin and cannabol. Cannabidiol contains high potency tetrahydrocannabinols (THC).

Cannabis has developed along with man as a multipurpose economic plant and, in many societies, it is a valued crop. It is probably one of the oldest plants known to man and cultivated for fibre, food and medicine. The term *cannabis* has been considered to be of Indo-European origin, and comes from the Greek word for hemp (Rubin 1975). The woody fibres of the stem yield a fibre that can be made into cloth and hemp rope.

Mode of Consumption of Cannabis

Cannabis has been used in India, in the form of bhang, ganja and charas, in beverages, confections and for smoking. The methods of preparations and types of plants used for extracting the drugs vary. The drug consists of dried flowering and fruiting tops of the postulate plants from which the resin is removed. The resinous secretion is formed only in female plants (Chopra and Chopra, 1965). Bhang (literally means destroyer) which is also known as Siddi, sabji and patti, consists mainly of the specially dried leaves seeds and flowering shoots of both male and female plants. The plant is harvested as soon as it matures and flowers, since its potency declines when the leaves begin to fall off and flowers turn yellow. It is then dried in the sun and after which the stems are separated from the leaves and flowers by striking them against a block of wood. The leaves are pressed and then reduced to a coarse powder containing about 15% moisture. It is usually harvested in the month of May-June in the plains and June-July in the hills.

Ganja (meaning "lighthearted") consists of the dried flowering and fruiting tops of the cultivated cannabis plants which are coated with a resinous exudence chiefly from the glandular hairs. The plants are harvested in July-August when the flowering stalks are picked. Three types of ganja are prepared, the flat ganja, round ganja and the choora ganja. Ganja is rolled into cigarettes or beedies or smoked in pipes (chillum) or hookhas. The THC content is about 2%.

Charas is the resinous matter collected from the leaves and flowering tops of the female plants. It is harvested in September-October. It contains about 3-15% THC. Charas oil is very potent and contains about 70-80% THC. It is rarely used in India.

Bhang is consumed usually in the form of a beverage or cake. It has a very low content of THC, less than 2%. The most common beverage made from bhang is 'thandai', which literally means cold drink. It is also called as sawi and sukha in Punjab and Uttar Pradesh, in Maharashtra as ghoti and pang, in Bengal siddi and in Rajasthan and Madhya Pradesh as Dudhi and in South India as ramras or raruras. It is made of pounded bhang with a little black pepper and sugar, and mixed with water to the desired strength. It is enriched by adding almonds, milk and curds. To improve its flavour it is sometimes mixed with fruit juices, cloves, aniseed, rose petals etc. Thandai is believed to be a cooling drink and is consumed extensively in the summer months, as it is believed to counteract dehydration. Thandai also serves as a supplement to a diet poor in proteins and mineral salts, as the almonds are fairly rich in proteins and fats

which have high caloric value (Mehdi Hassan, 1978). Bhang is used in confections such as Majun and Halwa. It is also mixed in curries. Bhang leaves are chewed. Ganja and charas are smoked with a chilum or a hookha.

Cannabis is also mixed with other substances such as alcohol, datura, opium and the seeds of nux vomica, to increase its narcotic effects. It is also mixed with 'ak' juice (*Calotropis gigantea*), bamboo shoots, opium, arsenic and strychnine. Sometimes copper coins are boiled with it to increase its potency. A drink called 'Madra' containing datura, opium, bhang, and alcohol is a popular intoxicant in the north (Chopra and Chopra, 1965).

Cultivation of Cannabis

Though *Cannabis sativa* grows wild all over the Himalayas from Kashmir to east of Assam, it was not cultivated extensively in India. Its growth extends down the the southern slopes of the mountains, and into the Punjab and Gangetic plains to a limited distance. It grows in the hill tracts of Assam and Bengal. Though in the higher areas, the plant propagates itself, in the lower slopes of the Himalayas and in the Terai it springs to a large extent from seeds carried down from the mountains. It is generally cultivated in the sub-Himalayan tracts (Chopra and Chopra, 1965).

The Hemp commission report (1898) puts the total area under cultivation to be about 6,000 acres, after deducting the fibre cultivation, which yields very little of the narcotic drug. The cultivation of cannabis plant decreased considerably after the League of Nations strictures on production of narcotic drugs. The figures for 1920-30, showed that hardly 1000 acres were under cultivation (Chopra and Chopra, 1965).

The cultivation of Ganja for nonmedical use was permitted in the states of Madhya Pradesh and Orissa under State Government control on a limited scale. This was in terms of the reservations taken by the Government of India, while ratifying the Single Convention on Narcotic Drugs of 1961. The licit cultivation of ganja for medical use was completely prohibited at the end of 1989. But it is illicitly cultivated in the Northern states of Uttar Pradesh, Bihar, Orissa and West Bengal and, in the south in Idukki in Kerala (800 acres, at 6000-7000 ft. altitude), Madurai, Coimbatore and Kodaikanal and the Nilgiri Hills and Kambakkal valley, situated on the border of Tamil Nadu. Ganja is also illegally cultivated in Karnataka, in Coorg and Shimoga districts in remote villages and estates camouflaged by rubber and coffee estates and in forests. It is grown near Bangalore in Hospet and Anekal taluks. Kerala has the dubious distinction of being one of the biggest ganja producing regions in the world.

Cannabis is the only commercial crop whose cultivation requires neither investment nor skill. Though in the higher areas, the seed propagates itself, the seeds just have to be sown and the plants grow without being cared for in the plains. Once established, the plant is very hardy. It does not require rich soil, but the soil needs to be well drained.

The small and marginal farmers in Andhra Pradesh have of late switched over to cannabis cultivation. By the end of 1992, cannabis was grown over 10,000 acres of land, and generated an income over a sum of 1,000 crores. Nearly 50,000 small farmers are involved in cannabis cultivation in Andhra Pradesh, mostly from Warangal, Vishakapatnam, Khamam and Cuddapah districts. It is grown in the middle of cotton or chilli fields, hence is difficult to detect. In addition, Naxalites, who control large parts of Andhra Pradesh, especially in Telangana districts do not permit the excise personnel into the area thus compounding the problem (Sunday, 31st Jan, 1993). Cannabis cultivation is also known to exist in the hilly regions in Jammu and Kashmir, and in the hilly areas of Manipur in the North - East. Orissa is fast attaining notoriety as a ganja growing area. Ganja has been flourishing in the remote areas of Orissa for the past several years under the alleged patronage of local leaders and excise officials. Cultivation is done mainly on the hill tops.

OPIUM

History of Opium Use in India

The Opium poppy, *Papaver Somniferum*, from which opium is obtained, is not native to India. It has been suggested that it was brought to India via the west coast by the Arab traders about the 9th century AD. Its primary use was medicinal and as its use spread rapidly, it was consumed in the form of beverage made from the seeds (Chopra and Chopra, 1965).

Opium Use In Ancient India

By 1000 C, the use of opium became more rampant and it was used for varieties of purposes, i.e, as an aphrodisiac, as a household remedy and to give courage to soldiers to fight wars (Chopra and Chopra, 1965). The rulers of India, indulged in it for social and convivial purposes. It was used so extensively during the reign of Allauddin Khilji that he imposed a total prohibition on its use in the city of Delhi (Shukla 1970).

The first recorded mention of opium as a product of India was made by Barbosa, in 1511 in his description of the Malabar coast, where he mentioned opium. The Portugese historian Pyres, in his letter to King Manuel of Portugal,

in 1516, referred to opium of Egypt and Bengal. The first recorded instance of cultivation of poppy in India, in the 15th century, mentions Cambay and Malwa as the places where it was grown. It was first cultivated along the sea coast area and later in the interior of the peninsula (Chopra and Chopra, 1965).

By 1500 C, the use of opium was so widespread in India that, Durate Barbosa, observed that "if they leave off eating it, they will die immediately". Similarly, Don Alfonso de Alburquerque wrote to the King of Portugal that Indians are lost without their opium to eat (Dane 1895).

About 1500 C, the use of opium had become so ingrained in the life of the people, that in Rajputana, it was customary to greet visitors with "Take your Opiate". In fact agreements ratified by the contracting parties were considered inviolably binding, if they had consumed opium together. Even the seals with which contracts and other legal documents were stamped, had the inscription "Take a draught of opium" (Fields and Tarrarin, 1970).

Opium Use during Moghul Period

During the reign of Babur (1524-1530), the founder of the Moghul dynasty, poppy cultivation and the sale of opium became state monopolies. It was extensively cultivated in the west coast at Cambay and Malwa and was an important article of trade with China and other eastern countries (Kohli 1966). During the reign of Akbar, opium became a regular source of revenue to the state and 'The Institutes of Akbar' recorded that the areas of cultivation included Agra, Oudh, Allahabad, Bengal and Orissa. Most of the members of Akbar's court including Akbar used opium, often combining it with other beverages (Chopra and Chopra, 1955). Abul Fazi, in his "Ain-e-Akbari", referred to opium and 'Kuknar', a beverage prepared from the poppy capsule. Most of the nobility of the courts of Akbar and Jahangir used a beverage composed of a mixture of hemp, opium, wine and kuknar called "Charburgha". The general practice was to pound the drug and mix it with water. Such a mixture was known as "Kusumba" and consumed in the form of a beverage. It was also taken in the form of a pill, generally twice a day and, on rare occasions thrice a day. The pill was made from opium in its crude form mixed with saffron, musk, sugar etc. Emperor Jahangir, was said to be very fond of opium as mentioned in his autobiography, "Tuzki Jahangiri". Opium became a household remedy during the Moghul period and was used as a pain relieving, sleep inducing and tension suppressing agent.

The 16th century travellers, mainly Gracia d'Orta (1501-1568), observed that opium was in great demand and the Indians always kept a supply of it.

Kaempfer, in 1689, wrote that the use of opium was common amongst the Indians and it endowed them with "serenity, hilarity and tranquility" (Austin 1978).

Opium Use in British India

After the collapse of the Moghul empire, the opium trade passed into the hands of the merchants in Patna (Kohli 1966). At this time, it was the usual custom to feed it to the coolies to ward off the cold, and to allay hunger. The "easy going well-to-do sections of society" flirted with it for a brief period, but its use soon fell into disrepute (Austin 1978).

The British East India Company, took over the opium monopoly in 1757, and assumed control of the opium growing districts of Bengal and Bihar. The British tried to popularize its use to increase revenue (Shukla 1970). Dr. Hove, a Polish traveller, who visited India in 1787, wrote that a beverage of opium mixed in water was a common drink in Western India.

General Warren Hastings, the then British Governor of India, tried to bring opium trade under government control, by exercising strict controls over cultivation and production. Unrestricted cultivation was prohibited by about 1773, and Hastings declared opium as a "pernicious article of luxury which the government should carefully restrain from internal consumption" (Kohli 1966).

In 1797, the Bengal Regulation IV was promulgated and in the place of contractors, agents were appointed for the procurement of opium and its manufacture in the factories owned by the East India Company. One of them was the Opium factory at Ghazipur, which had been set up around that time (Kumar and Tewari 1989).

In 1813, The Bengal Resolution regarding opium was passed, which inaugurated a policy of restricting the habit of opium eating by obtaining the "maximum revenue from the minimum consumption", because the government found it impossible to eradicate the habit (Chopra and Chopra, 1965).

After 1858, when the British Crown took over the reign from the East India company, the opium revenue contributed over 1\7th of the total income to the treasury, only third, after that of land and salt. Cultivation of opium was increased so that the largest net revenue was gained (Owen 1934).

Between 1858 and 1881, four proposals were put forward to abolish the opium monopoly and substitute an export tax on the drug. This was done to

reduce the embarrassment of the role of the British government as a drug merchant and still raise revenue (Owen 1934).

A Royal Commission was appointed in 1893, to inquire into the prevalence of the opium habit, as a result of the pressure put on the government by the British Society for the suppression of the Opium Trade. The commission examined over 700 witnesses from all walks of life and concluded that the smoking of opium and its use as a beverage was rare. The habit of administration of opium to children for medicinal purposes was found to be an ancient custom and its use was found to be moderate. The report concluded that the opium habit as a vice scarcely existed in India, that opium was extensively used for non medical and quasi- medical purposes, in some cases with benefits, and for the most part, without injurious consequences, that the non medical uses were so interwoven with the medical uses that it would not be practicable to draw a distinction between them in the distribution and sale of the drug, and that it was not necessary that the growth of the poppy, and the manufacture and sale of opium in British India, should be prohibited except for medical purposes. "Whatever, may be the case in other countries, centuries of inherited experience have taught the people of India, discretion in the use of the drug, and its misuse is a negligible feature in Indian life". Hence the commission concluded that it would not be possible to effectively enforce prohibition. It was also felt that prohibition of opium would cause an increase in alcohol consumption. The commissions recommendations were accepted as the official government policy.

In 1911, the British Government published a dispatch on its opium policy, which said, "The prohibition of opium eating in India, we regard as impossible and any attempt at it is fraught with the most serious consequences to the people and the Government. We take our stand unhesitatingly on the conclusions of the Royal Commission which were reported in 1895" (Austin 1978).

Rev. Paton, of the National Christian Council, after studying the evidence collected by the council concluded in 1924, that "Taking the country as a whole, it (habitual use of opium), is comparatively rare", a finding in keeping with the Royal Commission. But about the same time, the All India Congress Committee, passed a resolution that the opium policy of the Government of India was contrary to the moral welfare of the people. Among the many petitions presented to the International Opium Conference of 1925, in favour of the world wide restriction of the traffic in narcotic drugs to the needs of medicine and science, was the one from India, signed among others by Mahatma Gandhi and Rabindranath Tagore. In 1925, the Assam Provincial

Committee of the Indian National Congress appointed an inquiry committee to study the opium habit, its prevalence and effects.

In 1928, Chopra and his co-workers, studied the extent of the opium habit in India, and the effects of its consumption. The study indicated that opiate use was comparatively rare and that only a small fraction of the population used it habitually.

In 1937, in some provinces, where the Indian National Congress came to power, opium use was prohibited locally. In 1938, the Congress government enforced the recommendations of the Assam Provincial Committee, and the state government stopped the sale and use of opium completely in the three most heavily affected districts, in spite of considerable loss of revenue. Free medical treatment centres were also started to help opium addicts (Chopra and Chopra; 1965). The use of opium in India, evoked much criticism at this time in international circles, specially the United States. The policy of the Government of India, in this regard was attacked not only on the score of the illicit traffic which was alleged to have originated from India. In 1944, the US government, exerted pressure on the British Government to stop the use of opium for other than strictly medical and scientific purposes, to which the British government agreed to take positive steps towards reduction in production and consumption of opium in the country. In November, 1946, bowing to the pressure, the Government of India prohibited the eating and smoking of opium. Exceptions were made only in the case of registered addicts, who had to produce medical certificates periodically, to get their supply of opium (Chopra and Chopra, 1965).

Opium Use in Post Independent India

After India gained independence, the Congress government revived its policy of prohibition, except for medical and scientific use. During this time, opium prohibition committees were set up to mobilize public opinion against the habit. Treatment centres too were set up, where addicts were treated free of costs. All the three central government enactments, viz. The Opium Act of 1857, The Opium Act of 1878 and The Dangerous Drugs Act of 1930 became applicable besides the Opium and Revenue Laws Act of 1950, in all the states of the Indian union. In 1948, the government instituted a 10 percent annual cut in production. In 1949, the Constitution of India, proclaimed that "the State shall endeavor to bring about the prohibition of consumption, except for medical purposes, of intoxicating drinks and drugs which are injurious to health." The All India Opium Conference which was held in 1949, drew up a 10 year prohibition plan, according to which the Government of India with all

the states agreeing, started reducing bulk supplies of opium to the state governments (Kohli 1977).

The control of cultivation and manufacture of opium in India, was brought under the control of the government in November, 1950, which set up an All India Narcotics Board as a central organization to unify and rationalize the system of control. Between 1948-1949 and 1953-54, a reduction of 45 percent was noted in the consumption, primarily because of the decrease in production and the increase in price (Chopra and Chopra, 1955).

In 1958, registration of addicts was banned, except under exceptional conditions (Kohli 1966). In 1959, the sale of opium was totally banned and oral consumption was prohibited except for small amounts consumed by registered addicts on medical grounds. The number of registered opium smokers in various states was 1511 till the end of December, 1964.

Botanical Characteristics of Opium

Opium is extracted from the *Papaver Somniferum* or Opium poppy. It grows in any part of India, is generally cultivated and does not occur in a state of nature. *Papaver somniferum* or opium yielding poppy is considered to be the cultivated state of *Papaver setigerum*. Various species of the poppy have been cultivated as ornamental plants and have been mentioned by writers from the earliest times (Chopra and Chopra, 1965)

Poppy is a rarely branched, annual herb about one metre in height, the leaves are oblong, stem clasping, lobed and toothed, the flowers are large, white, purple or scarlet, the capsules are of 25 mm diameter and round stalked, the seeds are white or black called Khaskhas in India. The poppy capsules are called postdoda. The poppy seeds are used in cooking and its merits as food were recognized much earlier than the somniferous property of the capsules. It is also certain that the soporific and narcotic properties of the capsules themselves were appreciated long before their recognition in its milky sap (Chopra and Chopra, 1965).

Opium varies considerably in appearance, composition and quality, according to its place of origin and the mode of its manufacture. The sun dried juice (latex), from the unripe capsules of the poppy plant is known as opium. The opium alkaloids are divided into two groups, the phenanthrene-pyridiene group comprising of morphine, codeine, pseudomorphine, neopine and thebaine and the benzyl-isoquinoline, consisting of papaverine, narcotine and other alkaloids. Only a few alkaloids of morphine, codeine, papaverine and

norcapine have clinical value. The amount of morphine present in samples of opium differs in different countries. In India, the amount of morphine content is 3-15%. Since, opium grown in India had the smallest quantity of morphine, and hence was unsuitable for medicinal purposes, special efforts were made to increase its morphine content. It is also richer in codeine than opium produced in other countries. After making incisions in the poppy a thick juice is collected. It is made into a thick paste which is black or brown in colour. It is usually eaten, or smoked. The two poppy preparations which are used in India are madak and chandu. A third preparation which is rarely used is opium dross.

Modes of Consumption of Opium

Madak is prepared from a mixture of raw opium and water which is heated till a thick suspension is formed, and the scum is removed. The suspension is then strained through a cloth and mixed with a powder of charred leaves of babul (*accacia arabica*) till it becomes a thick paste. The paste is then rolled into pills.

Chandu or Chandul is a stronger preparation used by heavy smokers. It is prepared by boiling a strained solution of opium in water, in a copper vessel, till it becomes thick in consistency. As the concentration proceeds, crusts form on the surface, which are removed, until a thick mass of consistency and appearance of coal tar is obtained. This is the smokable extract.

Opium dross is the residue left in the pipe when opium is smoked. The quantity of dross produced depends on the type of pipe used and the method of smoking employed. The dross is usually prepared for smoking by mixing it with water and heating it till it assumes a thick consistency, then smoked in the usual manner. The residue left in the pipe is called second dross. It is generally believed that smoking and ingestion of dross is more harmful than the smoking of prepared opium probably, due its high alkaloidal (morphine) content.

In addition to crude and prepared opium, post, the unlanced capsules of poppy have also been used for medicinal and quasi-medicinal purposes.

Different kinds of accessories were improvised in different parts of India, for smoking opium. The most common was an elongated wooden pipe made from bamboo or desert accacia, 12-18 inches in length and $3\frac{1}{4}$ of an inch in diameter. One end fits into a small china or earthen ware bowl and the other end is the mouth piece. For smoking madak the bowl is slightly warmed and the madak pill is placed in it. Glowing charcoal is applied on its tip and several deep inhalations are made simultaneously through the mouthpiece. For chandu, a

piece of glowing charcoal is held with pincers close to the opium and the smoker applies his lips to the other end of the pipe. When the opium is on the point of melting, he places the burning coal on it and gives a few rapid and deep pulls, inhaling the smoke into the lungs deeply. After each pull at the pipe, he often eats something sweet, such as banana and sugarcane (Chopra and Chopra, 1965).

Cultivation of Opium

Poppy is grown in a temperate or subtropical climate where the rainfall is not excessive. After its introduction into India, in the 9th century AD, by the Arab traders, it was cultivated in Cambay and Malwa, primarily along the sea-coast areas and later in the interior peninsula (Chopra and Chopra, 1965).

It was grown extensively during the Mughul reign, in Malwa, Fatehpur, Allahabad, Ghazipur, Agra, Oudh and parts of Bihar, Bengal and Orissa. Its cultivation was encouraged for trading purposes, and it soon spread to other parts of India. Though there is no official record of cultivation of opium in the south, it is probable that it was cultivated in the south too.

In 1757 the monopoly of the cultivation of poppy passed into the hands of the East India Company. Warren Hastings brought the whole of the opium trade under the control of the government. A strict control was exercised in the production, distribution, sale and possession of opium. Opium cultivation was restricted to three centres, Patna and Bengal (Bihar and Bengal), Benaras (United Provinces) and Malwa (Gwalior, Bhopal, Baroda etc).

In British India, the cultivation of opium, was limited entirely to the United Provinces of Agra and Oudh. A license had to be obtained, from the government and the whole of the produce had to be sold to the government.

In the princely states, opium was grown mainly in Punjab for internal consumption. Poppy was also grown in the Himalayas, mainly in the Simla Hills. Except for central Punjab, where cultivation of poppy was allowed partly on religious grounds, the area under cultivation was gradually reduced.

In 1881, the total area under poppy cultivation in British India, did not exceed 1,000,000 acres. The average yield per acre was about 15-20 lbs, of opium, from which roughly not more than 20,000,000 pounds of opium was produced. A major part of it was exported and only a small quantity was kept for internal consumption. Since then, there was a progressive decrease in the production of poppy. While in 1900-01, 69,708 chests were exported, in 1919-

20, the number dropped to 10,509 chests and in later years it fell much further (Chopra and Chopra, 1965).

After India achieved independence, the Congress government decided that poppy cultivation for other than medical and scientific reasons should cease within 10 years. In the 1960's, cultivation of poppy was confined to Uttar Pradesh, Madhya Pradesh and Rajasthan, where proper control over production was exercised. By 1970, the area under cultivation was gradually reduced by approximately 25% and cultivators by 60%. Till about the early eighties, India was the main opium producing country, as well as the only supplier of licit opium for the world's requirements. In the 1970's in order to counteract the acute shortage of opiate raw material in the world market, the Government of India increased the areas of cultivation of poppy to over 66,000 hectares. The erstwhile dominant position of India as the principal supplier of poppy eroded in the face of very stiff competition due to the easy availability of alternative raw material (poppy straw concentrate), for the manufacture of alkaloids employed by a few other countries like Turkey, Australia, France and Spain. This resulted in some of the traditional importers of opium to switch over to poppy straw concentrate and thus curtail their imports from India, which then resulted in the stock-piling of large quantities of opium with the two Government Opium Factories.

Subsequently, to meet the situation, the Government of India enforced drastic steps to reduce the area under poppy cultivation. Reduction in the area has been brought about mainly by reducing the size of the holding of the individual cultivator. The number of licensed cultivators in 1991-92 were 1,42,295, as compared to 2,48,938 in 1977-78. Similarly, the licensed area under cultivation has been reduced from 66,338.58 hectares in 1977-78 to 14,214 hectares in 1991-92. Complete delicensing of individual cultivators will bring untold economic hardship to the traditional cultivators in the backward rural areas. Along with their family members and the additional part-time labour force engaged in cultivation and lancing operations, the number of people dependent for their livelihood on opium cultivation runs into millions involving a major socio-economic aspect.

With a view of collecting the entire produce of opium from the cultivators, the Government has been constantly raising the qualifying yield from year to year and the same has gone up from 25 Kgs. per hectare in 1980-81 to 34 Kgs. per hectare in Madhya Pradesh and Rajasthan and 32 Kgs. per hectare in Uttar Pradesh, in 1992. The qualifying yield for the year 1992-93, was raised upto 38 kgs per hectare. For further tightening the control on licit cultivation, offenses relating to cultivation and embezzlement of opium by the

licensed cultivators have been put on par with other trafficking offenses inviting a minimum rigorous imprisonment of 10 years with a minimum fine of Rs.1,00,000. This is extendable to 20 years' imprisonment and fine of Rs. 2,00,000 respectively.

The opium cultivation policy for the year 1993-1994 was announced on September, 1993. Under the conditions relating to grant of licenses for cultivation of poppy crop, cultivators who had tendered a minimum yield of 40 Kgs. per hectare in Madhya Pradesh and Rajasthan and 38 Kgs. in Uttar Pradesh during 1992-93 would be eligible for licenses in the 1993-94 crop year. Keeping in view the large scale damage to poppy crop during 1992-93, it was also decided that cultivators whose poppy crop suffered widespread damage and were uprooted under departmental supervision would also be eligible for license. Cultivators in whose village poppy crop was otherwise damaged by natural calamities and where such damage was duly reported would be given licenses if there was a fall in average yield of opium in that village compared to the yield of the previous year.

A cultivator, who deliberately exceeds the area allotted to him for poppy cultivation, or resorts to illicit cultivation or gets involved in any offence under the laws relating to narcotic and psychotropic substances or violates any departmental instructions or deliberately adulterates his opium, would not be allowed to cultivate opium for 1993-94, crop year. A licensee would be allowed for opium poppy cultivation on one plot only, not exceeding ten acres. In appreciation of the efforts put in by honest cultivators, it has decided that those cultivators who had tendered opium of 50 Kgs. a hectare and above during 1992-93, would be allowed an additional area of five acres as incentive (Deccan Herald, Sept. 29, 1993).

Today opium is cultivated in only such traditional areas as are specified by the Government of India, in the states of Uttar Pradesh, Madhya Pradesh and Rajasthan. The area under legal cultivation has declined by 80% between 1971 to 1992. The cultivation takes place under a license from the central government indicating the areas as also the identifying particulars of the plot of land in which poppy is cultivated. A system of checks and counter-checks have been devised to ensure that the area cultivated does not exceed the area specified by the Government and the entire produce from the land is made over to the Central Government. Growers lose their license when they are unable to sell to the government the requisite share of their crop. The control measures also include measurement of 100% plots, periodical reports on condition of the crop, cultivator-wise accounting of average produce, daily weighing of each cultivator's produce in the presence of village commission agent and the

departmental officers, and tight preventive patrolling in and around cultivation areas. Strict vigil, deterrent laws, very high per hectare yield, and the conventional Indian control system have made embezzlement of opium from the growing areas difficult.

In spite of strict controls, substantial amounts of opium are diverted from the licit cultivation to illicit markets. A fall in licensed growers is usually accompanied by a corresponding rise in illicit growers. In some areas, opium is converted into heroin in make shift refineries. Also, morphine base of acetalised morphine has also been detected by enforcement agencies. Illicit cultivation of opium has been detected in Uttarkashi, Chakrata (50 acres at 3000-4000 ft. altitude) in the Dehradun district in the Himalayas and about 30 acres in the Chakpikaron Block of Chandel district, and in certain areas of Manipur state. Most of the illicit cultivation is close to the Indo-Burma border, and the Indian Kuki tribals are forced into illicit cultivation by the armed Burmese Kuki tribals. Opium is a profitable cottage industry in Arunachal Pradesh and Mizoram (The Pioneer, 1993). Clandestine cultivation of opium for the illicit market in growing areas of Rajasthan, Madhya Pradesh and Uttar Pradesh also continues unabated.

Export of Opium

The demand for Indian opium in the world market has been fluctuating. It sharply declined during 1980-81 and 1981-82, but picked up again during 1982-83 reaching 830 tonnes. From 1983-84 to 1986-87 it remained around 600 tonnes. Thereafter, there was a sudden downward trend and during 1988-89, it touched an all time low of 310 tonnes. However, in subsequent years, it has shown signs of recovery as is evident from the fact that during 1989-90, 1990-91, and 1991-92, total export of opium was 555 tonnes, 850 tonnes and 717 tonnes respectively.

Destruction of illegally cultivated opium poppy has declined by an alarming 80% in 1992, over the previous years seizures of illicit opium. It fell from 21,145 Kgs. in 1991 to 1813 Kgs. in 1992, although seizures of heroin has declined.

Traditional Uses of Cannabis and Opium

Therapeutic applications

Psychoactive substances especially cannabis and opium have been in the pharmacopeia of Indian medicine for a very long time. Although we know all too little of the medical practices of ancient times, historical evidence shows that cannabis and opium had a venerable medical history in India.

Cannabis is mentioned in the Atharvaveda (1400,BC), as a medicinal and magical plant. Both Ayurvedic and Unani Tibbi systems in India have used cannabis extensively in their medical armamentaria as a therapeutic agent for many centuries. The 18th century Ayurvedic work on Materia Medica, the 'Dhanawantari Nighantu', summarizes its properties, actions and indications. Although the Unani Tibbi system did not arrive in India until the 9th century, when it was imported by the Muslims, the use of cannabis in the system antedated that time. The Quranic laws on intoxicants were more tolerant toward the use of drugs such as opium and cannabis because of the paucity of means of relieving pain in the medieval Muslim world.

In India, Dwarakanath (1965), has traced back its usage to folk medicine to a period between the 3rd and 4th century BC. Cannabis has been used since the 19th century, in allopathy, for a range of complaints that include pains, insomnia, depression and other mental illnesses and dysmenorrhea (Fort 1969). In 1824, Dr. W. B. O'Shaughnessy, Professor of Chemistry, in the Calcutta Medical College, used cannabis in the treatment of patients suffering from such diverse ailments as rabies, rheumatism and epilepsy. He also found that tincture of hemp was an effective analgesic and has anti-convulsant and muscle relaxant properties (Chopra and Chopra, 1965).

Cannabis continues to be used in both Ayurveda and Tibbi systems of medicine, as an anodyne, hypnotic, analgesic and antispasmodic. It is used extensively in the rural areas in the treatment of enteritis, dysentery, dyspepsia, gonorrhoea and cholera, neuritis, rheumatism and neuralgia as well as being used as a hypnotic and antispasmodic. As a medicine it is administered by mouth and hardly ever by smoking. Use of cannabis to relieve fatigue, and anxiety is also common. The number of persons who use bhang as medicine is greater than those who use ganja. Bhang has a milder action and is used as an antispasmodic more frequently than ganja and charas (Chopra and Chopra, 1965).

Cannabis is sometimes given mixed with sweets, as tranquilizer for

children, to help them sleep or keep them quiet while the mother works in the field. It is used by the elderly to ease their aches and pains. Older persons also use it simply to while away the time when they are too old to work any more, as they sit around during the day where there is little else that they can do. Cannabis is usually mixed with other ingredients and is taken in limited quantities, as the Ayurvedic practitioners believe that too much of it could result in "insanity, weight loss and decreased semen" (Fisher 1975).

It is difficult to ascertain when opium was introduced into Ayurvedic medicine. The ancient books on Hindu medicine make no reference either to the poppy or its products. Similarly, the classic works of Chakradatta, Sushruta and Vaghabatta, have made no mention of opium. Even the 11th century Chakradatta does not mention opium. Hence the exact time at which opium was introduced into Ayurvedic medicine is open to speculation. However, a reference to opium is made as an antidote for rat poison; in the 862 AD work on toxicology, written by Narayan of Malabar. In the later works such as Sharangadhara Samhit (14th and 15th centuries) and Bhavaprakash (16th century) opium is freely mentioned in the materia medica section as being used in medical preparations. Hence, it is probable that opium came to be used in Ayurvedic medicine after the Mohammedan conquest (Chopra and Chopra, 1965).

Opium was used in as many as eight preparations by the Ayurvedic physicians in the last two centuries. They are Karpura rasa, Ahiphenasava, Rhihat Gangadhar Churna, Makadeya Churna, Dugdha Vati, Grahanikapata rasa (Rasendra sara sangraha) Akarakaravadi Churna Sarangadhara) and Dambhunath rasa (Bhaishajya tantra) (Chopra and Chopra, 1965).

The use of opium in Ayurvedic medicine today is confined mainly to diarrhoea and dysentery. It is also used to increase the sexual and muscular powers and produce numbing of the brain (Chopra and Chopra, 1965). The Hindu physicians did not use it much as a sedative and pain reliever and even today, it is used only occasionally to relieve pain and spasms (Chopra and Chopra, 1965).

The Mohammedan physicians used this more extensively. They had derived this knowledge from the Arabian Medicine where opium is described as an anaesthetic and analgesic. Opium is prescribed by the Tibbi physicians for relief of pain in almost all parts of the body, as well as for drying of a catarrh, allaying of cough, asthma and hiccups. It was also used in the treatment of manic delirium and the inflammatory conditions of the brain, in the treatment of paralysis, pain in the joints and lumbago, epilepsy and similar nervous conditions and for curing intermittent fevers (Chopra and Chopra, 1965). The hakims

prescribed them for headache, diarrhoea, dysentery and digestive troubles in children. An infusion prepared from the poppy heads was used as a soothing application for bruises, inflamed, excoriated and swollen parts and sometimes as an application for various forms of painful conjunctivitis, inflammation of the ears etc. Fermentations with poppy heads are even now applied to painful inflammatory swellings. Poppy paste is applied to the forehead for relief of headaches, and on the cheeks for the relief of toothaches. It is also impacted into the tooth to dull a tooth ache. Opium suppositories are used in the treatment of gynaecological problems in women. It was also used in the treatment of small pox, diabetes and malarial fever.

In Tibbi materia medica, it is used in (1) Barshasha, in the treatment of catarrhal conditions of mucus membranes, cough, delirium, epilepsy, diarrhoea, haemorrhage, premature ejaculations etc, (2) Hub-i-peceash, in the treatment of dysentery, (3) Hubi-i-jadwar, for catarrh, coryza, cough, diarrhoea and premature ejaculations, (4) Hub-i-siyah, a paste which is painted on the eye lids in case of conjunctivitis and ocular pain, (5), Hub-i-sarfa, for cough, (6), Hub-i-haiza, for cholera, (7), Kurs-i-massallas, for headaches and painful conditions, (8), Hub-i-mumsik, an aphrodisiac pill used for premature ejaculation and impotence (Chopra and Chopra, 1965).

Opium is used as a house hold remedy in a large variety of common ailments such as cough, bronchitis, asthma, diarrhoea, dysentery, colic, chills, haemorrhoids, recurrent febrile attacks, neuralgic troubles, malarial fevers and cachexia, rheumatic pains, diabetes, nervous troubles and all painful and wasting diseases of every kind (Chopra and Chopra, 1965).

Cannabis and Opium were used in India, particularly because medical facilities were poor. In medieval India, opium was extensively used as a household remedy. Almost all the diseases for which opium was used were of a minor character and the drug was taken in small doses. It was rarely prescribed in its raw form and was usually mixed with other ingredients. Most applications seemed to have been for insomnia, nervousness, upset stomach, diarrhoea, rheumatic pains, and the like. It was advertised as a prolonger of sexual intercourse and for refreshing the weary.

But the use of cannabis and Opium in the medicine of India is not just a matter of history. It is very much a part of the present time. As Dwarakanath (1965), points out, that 80% of the population of India live in villages. Most of these are served by atleast one of 1,168 Ayurvedic physicians or Unani Hakims. Of this number, only 30,000 are institutionally qualified and permitted to prescribe the materia medica of scientific medicine and so if one banned the use

of cannabis and opium by these practitioners, a very serious vacuum in medical treatment would occur. Investigations by Chopra (1928) showed that the use of opium in both Ayurvedic and Tibbi systems on the whole had comparatively declined. Out of 200-250 preparations of Ayurvedic medicines kept in the main dispensary of the Ayurvedic and Tibbi college of Delhi, only 3 preparations contained opium.

The administration of opium to infants is an ancient custom in India. Abul Fazl reported in his *Ain-e-Akbari*, that it was a common practice to give opium to infants in the 16th century. Mothers of all backgrounds were in the habit of giving their children below 3 years minute doses of opium for the prevention of diarrhoea and other infantile ailments. It was also supposed to counteract certain undesirable properties of breast milk. Perhaps the main reason for its widespread use was to lull the child to sleep so that the mother could pursue her duties uninterrupted in the home and the fields. The practice has of late become obsolete due to the education of the mothers, and the non availability of opium.

Religious Uses of Cannabis and Opium

The medical use of cannabis and opium were soon expanded and complicated by social and religious uses. Of the great world religions, it is Hinduism, which probably is the most overtly associated with psychoactive drugs. In the Vedic times, Soma played a prominent role in the religious rituals. It is believed that God Shiva was very fond of cannabis and cannabis products are still offered to Lord Shiva on Shivarathri day in the temples as being the "food of God" (Madhihasan 1975). Shiva is frequently depicted with a bowl filled with herbs under his arm as one of the emblems of the mendicant, and there is a traditional association between Shiva and cannabis. For Shivites, smoking cannabis is a way of offering it to Shiva (Madhihasan 1975).

Some scholars believe that since both the plant soma and Lord Shiva are identified with the moon, cannabis is associated with Shiva (Underhill 1921). The 'Satpatha Bramanas' mentions the importance of offering it to the spirit of the dead on the new moon days, for the moon is supposed to come to earth on this day, and since soma the food of Gods and the departed is unobtainable on that day, the spirits would be without food unless the worshipper provided it (Underhill 1921).

On Shivarathri, it is not only poured over the Shivalinga, but is consumed as "prasad". Similarly, it is a well established custom to use cannabis in celebrating various religious festivals such as Krishna Astami, Rama

Navami, Diwali, Holi, Durga Pooja, etc. Even children consume it on such occasions and on social occasions. It is offered as prasad in many temples notably Puri Jaganath, Pashupathinatha, Mathura, Kashi and others. It is also used and distributed in many Sikh shrines. It is drunk on the festival of Kama by the Rajputs of Bondal (Chopra and Chopra, 1965). In Karnataka, cannabis is drunk in the form of Ramrasa, on certain festivals such as Rama Navami, Krishna Astami and Shivarathri, after offering it to the deity.

It is widely used by Sadhus, tantrics, and Bhagats who hold that it is an aid to concentration and meditation and that it frees the mind from worldly bonds. It is an important aspect of tantric rituals. Cannabis functions as a disinhibiting agent in certain esoteric tantric rituals. Aghori sadhus use cannabis regularly in their rituals which include consuming urine, excreta and flesh of corpses. Hinduism is in many ways a puritanical religion and cannabis helps to psychologically shore up adherents who partake of these somewhat exotic practices; for eg. sexual intercourse in the case of tantric rituals and the dietary customs in case of the aghoris (Bharathi 1965). The Bhagats are permitted to use drugs such as cannabis and opium but not alcohol. The Bhagats from lower castes, adopt the customs and practices of the higher castes, such as fasting, vegetarianism, ablations and teetotalism, since it is believed that these practices help in achieving the supernatural.

Sadhus belonging to different sects, in the Himalayas use cannabis. It is the combination of the general austerity of asceticism, the unaccustomed climatic rigour, and religious beliefs which produce conditions in which the use of cannabis is almost a professional technique (Fisher 1975). It is considered an act of merit for a layman to donate cannabis to a sadhu in some places. Cannabis is regularly consumed by the devotees of Shiva during bhajans in temples, satals (Shelters for pilgrims) and in private homes. Though it is not obligatory to smoke cannabis at these bhajans, a chillum is passed around during bhajans to signify devotional fellowship. It is supposed to promote good bhakti (Fisher 1975).

Hindu ascetics and religious mendicants use cannabis drugs to overcome hunger and thirst. The Brahmins who are forbidden to use alcohol are allowed to drink bhang sherbat after a fast. Cannabis is much enjoyed by the Brahmins (Carstairs 1954). Some Jains who undertake long fasts for 30-60 days take opium with water to appease hunger. It is also taken by Muslims during Ramdan to overcome hunger pangs.

The use of cannabis by muslim fakirs is mentioned in the Opium Commission Report (1893). The fakirs revere bhang as the giver of long life and

believe that it frees them from worldly bonds and induces communion with the divine spirit (Chopra and Chopra, 1965). Though the Koran makes no special reference to cannabis or to any other drugs known at the time, the Quaranic laws do not prohibit their use.

The Hindus take a pilgrimage to Shabarimala, the revered Ayyappa temple in Kerala, in the months of December and January, for which the devotees undertake certain vows like celibacy, vegetarianism, and so on. They also have to abstain from taking alcohol, which they follow strictly. However, there is no restriction regarding smoking of tobacco and cannabis.

Social uses of Cannabis and Opium

Both cannabis and opium seemed to have moved from restricted ritualistic and \or medical use to "social" use during the history of mankind. To many, indulgence in cannabis and opium has become compulsory on such occasions such as marriages, deaths, and social gatherings. Literature from Rajasthan, Saurashtra and tribal literature is full of stories, poems glorifying opium and its effects. Gradually, it got integrated with the feudal life style of the rich Rajputs and was developed into a fine institution.

In the Manwar ceremony of Rajputs, opium was used extensively. The women of the zenana, were given opium by the eunachs so that their inhibitions could be lowered so that the woman could get the courage to speak her husbands name aloud. The opium was drunk in liquid form followed by honey to remove the bitter after taste .

Cannabis drugs are taken to give courage. Rajput warriors used to take bhang to banish their fear and to get courage before battles, and to dull the pain of the battle wounds. It was also used by criminals to drug people before robbing them. It was given in a form of a sweet mixed with datura, sugar etc. (Chopra and Chopra, 1957).

In some games and sports, which entail great physical efforts and endurance like wrestling, the use of cannabis products is common. Cannabis is given to oxen to give them strength to plough the field. It had been observed that in Punjab and some other states, the use of Ganja and Bhang increases during the harvest season by 50 percent. There is a popular belief that cannabis in moderate doses increases sexual prowess and hence it is often taken by newly weds, in the form of a beverage or confectionary, such as majunm. It is also taken by prostitutes to increase sexual desires. Butchers in India take it before they ply their trade. Labourers working on building sites usually take a few puffs of

ganja or drink a glass of bhang after their work. Syces, grass cutters, sweepers, weavers, day labourers, smoke it.

Women in rural Rajasthan, Madhya Pradesh Bihar and Uttar Pradesh, use opium to get that extra bit of strength to cope with the multiple pressures of household chores and the rigours of outdoor work in the fields or in the stone quarries. The child prostitutes, in Bombay, at the time of initiation into prostitution, are forcibly dosed with heroin or cannabis, which is an integral part of the initiation process, and they continue to use drugs in order to tolerate the unpleasantness of their profession. It is reported that some landowners give opium to agricultural labourers at the end of the day as part of the wages so that they can sleep peacefully and get ready for work next day (Chandrashekar et al, 1993).

The Changing Patterns

India is a unique example of the availability of mind altering substances since recorded history, along with social control mechanisms to prevent misuse. Despite the pervasiveness of opium and cannabis in Indian history, and in spite of the fact that India has been and is an opium producing country and one in which access to and use of the drug has been widespread, their use never became as extensive as in China, nor did they engender such extreme concern.

Further, the merchandising was locally directed to traditional medical and folk medical use and secularly, to organized social or group use, licit distribution of opium was limited to forms suitable for eating rather than for smoking. International trading was directed toward China, rather than internally. Once opium smoking began, Chinese use was personal or social, that is, unregulated, informal, and nontraditional rather than medicinal (Austin, 1978). In India, on the other hand, medicinal use was paramount after opium's introduction by the Moslems, and was governed by a traditional system of social controls. Recreational opium smoking was never as prevalent in India as it was in China.

The use of drugs in India differed from most western countries. The drugs were generally used in a crude form and mostly taken orally, though smoking of opium and cannabis was also adopted. Usually, the drugs were prepared by the user himself, which limited their excessive consumption. Further by using crude products, the users absorb comparatively smaller quantities of the active principles which are responsible for producing toxic effects.

Further, in India, the traditional patterns of use and abuse were

relatively stable without great loss to productivity of the traditional kind.

Folklore texts, historical sources such as that of the Mughal empire and the accounts of saints and sufis support the above assumption.

The Punjabi classic, *Hir Waris Shah*, depicts the accepted or acceptable use of drugs. Three kinds of drug use and the social attitude towards these are clearly depicted. Hir's uncle is criticized and put down for his drug use. His association with village outsiders and low status groups are seen within the context of drug abuse and he is generally not believed when relating gossip. The second use depicted, is a tribal marriage party that drinks bhang. No stigma is attached to this use. A third context is that of Ranjha's role as a jogi, who has a religious legitimation for the abundant use of drugs, referred to as the "milk of the leaves".

The drug use by the marriage party is depicted without any connotation of danger or deviance. The use of bhang as a cooling drink is still the main justification for bhang in many parts of India. The cooling effects of bhang are said to be more effective than any other cold drink or cold water. The body is said to store coolness for a longer time, making the drinker less sensitive to extremes of temperature. Bhang in this context is not regarded as an intoxicant, but valued for its medicinally explainable cooling effects.

The village outsider, however, is criticized for his deviant habit. Drugs are considered in his context to be the attribute of an outsider, and a person who still claims to belong to the village community is pushed to the periphery of the community because of his use of the drug with low status groups.

The jogi, is an accepted legitimate user. A wandering mendicant has the right to take intoxicants which enable him to reach and stay in "hal", or altered consciousness. This drug user, however, has forgone the right to a normal integrated social life and has accepted the position of an outsider, a position which he considers an asset, a triumph over the fixed society he is up against - the "dunya dari". His drug use becomes religiously legitimated and this religious legitimation takes priority over the drug habit, which is encompassed by an even more integrative ideology bestowing upon him such powers as magical curing.

Thus there are definite patterns from these accounts. Class distinctions are expressed in drug use, certain classes showing a clear preference for specific drugs, further a group of drug users with religious legitimation attached to their use, emerging as a distinct sociological entity. A third criterion is medically

motivated use in the case of bhang (Nayyar, 1984).

Until the early sixties, drug use was not much of a problem in India. In the wake of the "hippie" movement, the use of drugs expanded beyond the traditional drug use groups into the student community, and it was taken mainly as a social lubricant rather than for religious or ritual reasons.

Gradually, the profile of the drug user changed. Youngsters began using it as a novelty, a pleasurable and acceptable way of having fun with friends. Though cocaine was used in India since the beginning of this century, it was restricted to Calcutta, Bihar, Uttar Pradesh (Chopra and Chopra, 1965). In the 1950s, Methaqualone, a nonbarbiturate sedative hypnotic was introduced into India as an antimalarial agent. The sedative properties were soon discovered. After several years of street abuse, methaqualone was classified as a Schedule II drug and was banned in 1989. With its subsequent disappearance from the open market, tranquilizers which are freely available in the open market became the drugs of choice. Together with Morphine, Pethadine, Codeine etc, they came to be abused in the urban areas.

In the eighties, the alarm bells began to ring with the appearance of heroin on the drug scene. A bomb exploded, with drug use encompassing diverse sections of society. Heroin began to be used by all sections of society cutting across, class, sex, age and educational background. The situation further became serious, with the emergence of the "Golden Crescent" as a major producer of heroin and India as a transit country. This brought about an abundance of illicit drugs into the country as an overspill of trafficking. Further, with the increased illegal cultivation of cannabis and opium, psychoactive drugs began to be diverted from the legal market. Since 1989, drugs like Tidegesic (buprenorphine) have begun to be used as a cheap alternative to heroin (brown sugar) and this has further compounded the problem, as it is an injectable, and this can increase the risk of AIDS.

It is a well known fact that just as demand creates supply, the supply or availability of an item in the market tends to generate its own demand. The increased availability of narcotics drugs in India in the eighties due to "transit traffic" resulted in increased abuse which has now spread to the poorer section like factory workers, autorickshaw drivers, rag pickers, labourers etc.

Drug use changes with corresponding changes in the society. Major socio-cultural changes in India in the wake of industrialization have made people more receptive to the adoption of innovative drug use. Rapid technological advances has led to revolution in communication. Today, there are so few sure

models or sure paths for the youth to follow. In the past, the individual, his family and the society, in which he lived were strongly controlled and influenced by cultural beliefs. His mode of living, code of conduct, and his role in society were well defined by custom. In this age of flex and change, the previous social, cultural and religious controls over behaviour are weakened. With religion loosening its hold on people, the philosophy of life has become materialistic. Family ties have broken down, resulting in decreased guidance from elders.

Further, the revolution in communication, and industrialization has led to competition. Educated youth with higher aspirations than their elders, and with less opportunities has led to frustration. They look for ways of escape. They are not able to take on adult roles comfortably. Many feel alienated from society and resentful of it because after spending years in school and college, they find disappointment in leaving it.

Migration has further expanded cities and towns, resulting in a proliferation of slums. As new urban centres develop without traditional social structures and when work opportunities are not available, a variety of unstable behaviours develop.

The abruptly imposed bans on the traditionally accepted use of opium has been a direct cause of more people using more dangerous drugs in greater amounts. This has led to the development of flourishing illicit traffic with extensive corruption and criminality. Further there is also an increased circulation of money in India. Migrant labour from India, especially to the Middle East, has resulted in an enormous cash flow to the country.

The expansion of the transport sector and the developing network of roads has led to the formation of a new occupational group, the truck drivers. The transportation work serves among others to spread drugs rapidly all over the country.

A combination of factors such as technological advances, rapid transportation, increasing urbanization and other aspects such as greater availability of narcotic drugs, the growth in the drug trade and in the interest of the youth in a whole range of new substances, has resulted in an epidemic of drug abuse in India. This has produced more hazardous effects and posed new, complex and challenging threats manifested in two ways, namely in the wider extent of use and the damaging shift from natural drugs to the misuse of the more potent manufactured substances. Heroin has replaced the century old traditional use of opium. Changing patterns have been observed particularly in the misuse of opiates, sedative and hypnotic drugs. The inhalation of certain

volatile substances such as petrol, thinners, glue, etc. is increasing in street children leading to severe damage to the central nervous system, liver, kidneys and bone marrow. The new patterns of the more potent synthetic substances has led to greater propensity for rapid spread and expansion in their use.

Drug Trafficking

India is strongly affected by a constantly increasing illicit trafficking of drugs emanating from sources of supply outside and across her borders. The problem of drug trafficking in India had been accentuated by India's geographical position. Being between two major areas of illicit supply and production, (The Golden Crescent and the Golden Triangle), India has become a victim of transit traffic of heroin from Afghanistan and Pakistan. Further, Nepal, which borders India, on the northern side is a source of hashish and ganja, which is also smuggled into India. It is of considerable significance that the world's largest production of opium is in the vicinity of India. Between themselves, Myanmar, Pakistan and Afghanistan produce most of the world's illicit opium and opiates. Myanmar is the world's largest producer of illicit opium produced in South-East Asia. About 60% of the heroin that is smuggled into India, is believed to be smuggled from Afghanistan and/or Pakistan, sometimes in bulk quantities across the states of Rajasthan, Punjab, Gujarat and Kashmir, by foot, camels and road. A small amount less than 1% is brought across the eastern border from Myanmar and Thailand. This is exemplified by the seizures of heroin in India. In 1988, out of 3029 Kgs. of heroin seized 2747 Kgs. originated from the Golden Crescent, which entered India, through the Indo-Pakistan border, mainly Punjab (Kumar and Tewari, 1989).

Though drugs were smuggled into India, from the golden triangle, and Nepal, from a long time, it was after the emergence of Golden Crescent as a major source of heroin, that the problem of trafficking in India escalated. The transit of drugs through India increased in the late seventies and early eighties, after the Afghanistan conflict in 1979, when the Russians took over the country and as a result of which the route to Iran and Turkey was totally blocked. This resulted in Pakistan and Afghanistan syndicates searching for an alternative route. India, with its long borders with Pakistan emerged as a lucrative alternative with entry points in the Indian border states of Gujarat, Punjab, Rajasthan and Jammu and Kashmir. The terrorist organizations in Punjab and Kashmir have added impetus to such activities. Today terrorism thrives on narco funds and major terrorist groups in India have become important carriers of narcotics. It is these funds that are used for purchase of arms, ammunition and explosives. Terrorist groups such as LTTE, the Punjab and Kashmir militants use drug money to fund their activities. Terms such as narco terrorism

and narco guerillas have now come to be used in the context of the violence and terror that is spread by drug cartels which are engaged in drug trafficking. The bomb blasts in Bombay, in February 1993, were proven to be the handiwork of the drug mafia.

Further, raids conducted in August 1992 against a Columbian money launderer for the Cali and Medellin cartels revealed that drug money was being deposited in an account in Punjab (US state dept report, 1993). Exploiting flaws in the banking system, the cocaine cartels have used India, to launder their money. India's Hawala market (underground banking system) has links with drug trafficking (Indian Express, March 10, 1993).

While the drugs smuggled through the Punjab sector and through Sriganganagar and Bikanar sector of Rajasthan are taken to Delhi, drugs smuggled through Jaisalmar and Barmer sectors of Rajasthan and Gujarat are moved to Bombay. With the result, Delhi and Bombay have emerged as major exit points. The 1568 Kms long Indo-Nepal border has been traditionally an area of major smuggling and trafficking activities. Nepal has wild growth of cannabis on the foothills close to the Indo-Nepal border. It is also cultivated in the Terai region of Nepal. Major trafficking of ganja from Nepal is carried through the four centers, viz, Siktal, Raxual, Jainagar and Bhimnagar in the state of Bihar. Trafficking on this border is carried through trucks, vehicles, and head loads with storage places adjacent to the border on the Nepalese border (Kumar and Tewari, 1989).

There is a marginal reduction in the inflow of cannabis through the Nepal border after the eradication of cannabis in the Terai region and the strict measures taken against the drug traffickers in Nepal (Kumar and Tewari, 1989). Hashish is similarly smuggled into India, through the Indo-Pakistan border through the state of Rajasthan, via. Jaisalmer and taken to Bombay by road. Opium is smuggled from Burma into India through Imphal via Moren and through the state of Mizoram. The movement of heroin from the golden triangle region has made the north east states of Arunachal Pradesh, Manipur, Nagaland and Mizoram vulnerable.

Heroin from the Golden Triangle is mainly smuggled into India, through Manipur and Mizoram. This contraband is brought from the Golden Crescent and Golden Triangle to Bombay, Delhi and to a smaller extent Madras, Bangalore and Trivandrum and from there to western countries (Rao 1993). The drug trade is controlled by the underground dons, the drug mafia. Of singular importance is the emergence of Nigerians as the single largest group which has started dominating much of the drug trafficking activities in the Indian

metropolitan cities, particularly Bombay and Delhi. The involvement of other ethnic groups in drug trafficking is also known. The Afghan refugees residing in India provide an infrastructure for drug dealing by Afghan syndicates. Similarly, Pakistani syndicates have well established contacts for drug runs across the Indo-Pak border and for the sale and distribution to local and foreign whole salers in the cities of Bombay and Delhi. The proceeds from the drug trade are sent back to Pakistan, through the Hawala market. With the rise of LTTE, SriLankan Tamils also are involved mainly in Madras and Thiruvnathapuram.

India has become a primary source of Methaqualone. Though, its manufacture in India was completely banned in January 1984, it is clandestinely manufactured mainly to be sent to South Africa and other African countries. South Africans, Zambians and Kenyans have been identified as the main couriers of this drug. In 1989, over a period of three months, three firms in Goa, Karnataka and Maharashtra were found to be involved in the manufacture of mandrax tablets (CBI Bulletin, 1989). The drug traffickers locate a sick factory or an industrial unit in isolated and backward regions and employ a qualified chemical engineer to manufacture tablets. The seizures of methaqualone shot up from 2141 Kgs. in 1990 to 4415 Kgs. in 1991 and 6381 Kgs. till September 1992. Of the major reason cited for the spurt in Mandrax traffic is that, a mandrax tablet which costs any where from Rs.3-5 in illicit markets in India, is sold for \$1.5 in South Africa (about Rs.50). Another reason for mandrax trafficking is that it can be easily manufactured in small laboratories in tablet or powder form. Besides methaqualone, India produces acetic anhydride, the essential chemical used by illegal laboratories in South Asia, to illegally convert opium into heroin. There is also an increase in the illicit manufacture of opiates in India. Cases of illicit manufacture of morphine and other synthetic drugs have been detected.

The drugs are brought from Bombay, Gujarat, Rajasthan to Bangalore or Madras by road or by train. From Bangalore, they are sent to Tuticorin, Trichirapalli, Madurai, Kanya Kumari and other places (The Week, Dec. 20, 1992).

Often truckers who transport agricultural produce are used as drug pushers. The dried plants are packed in polythene packets which can easily be concealed within fruits, vegetables and food grains. Other modes of transportation include human carriers like leprosy patients, elderly men, women, sadhus and those who do not usually attract the attention of the police (Sunday, 31 Jan, 1993).

While the cultivation of the crop is almost exclusively done by small farmers, the booking and transportation is controlled by drug operators.

Drug smugglers have used novel and ingenious methods to traffic drugs. Drug smugglers operating in the frontier provinces of Pakistan and Afghanistan have found walnuts safe carriers of drugs. They open the kernels fill the hollow shells with heroin and rejoin them with special gum. They are mixed up with other genuine walnuts. Other nuts such as peanuts have also been used (Deccan Herald, April 4, 1993).

Fortunately, India's involvement as a transit country is changing. The situation in the Balkan states and Russia has dramatically altered the situation and the drug barons of the Golden crescent have altered the routes again. Though Bombay is still being preferred as the main conduit point, Russia's turmoil ridden state with rampant unemployment has provided an excellent camouflage for drug trafficking and cheap couriers.

Steps taken to combat drug abuse

National

The government of India has taken various legislative, administrative and preventive measures to counter the drug trafficking in the country.

Destruction of Illicit Cultivation

India in the last few years has undertaken detection and destruction campaigns in cannabis and opium cultivated areas by foot or motorized patrols. Manual eradication of the cannabis plants has proved to be the most effective means of destruction. Central Bureau of Narcotics of Gwalior reported the seizures of almost 52 million cannabis plants in 1989. In the last 4 years, about 400 acres producing opium poppy and 7,000 acres producing cannabis were destroyed.

Anti-smuggling activities

The following Table I. (see appendix 1) shows the number of cases detected and the quantity of drugs seized during 1981 to 1992 (upto April).

Table II. source wise quantity of narcotic drugs and psychotropic substances seized with percentages, from 1987 to 1992 (upto 30.4.1992). Table III. shows the quantity of narcotic drugs and psychotropic substances seized on illegal import, attempted export and internal traffic in India, during 1989, 1990, 1991 and 1992.

A glance at the Table III. shows that the total quantity of drugs seized shows a gradual decline for all types of drugs.

Legal and Administrative Measures

The Narcotic Drugs and Psychotropic Substances Act, (NDPS) 1985, came into being as both the Central Government and Parliament felt the need for a comprehensive drug related law. Prior to the passing of the NDPS Act, statutory control over narcotic drugs was exercised through three central enactments ie. Opium Act, 1857, Opium Act, 1878 and the Dangerous Drugs Act, 1930. A number of state laws co-existed, particularly related to cannabis.

The Opium Act, 1857, was an attempt to consolidate and amend the law relating to the cultivation of poppy and the manufacture of opium. The Act provided the procedure for cultivation of opium poppy, manufacture of opium and matters connected therewith. The statute aimed at the control of poppy cultivation by directing that all cultivators tender their opium produce to the Government. Limits were fixed for cultivation and licenses issued. Violation or failure to comply with the provisions of the statute resulted in penalties.

The Opium Act, 1878, on the other hand, aimed at the regulation of possession, sale, purchase, transport and import or export of opium providing for punishment for infringement of the provisions, with imprisonment upto one year and a fine of Rs 1,000. Powers to seize opium possessed unlawfully were vested with the Police and in addition with the Excise, Revenue and other authorities.

Both the Opium Acts operated simultaneously. "These two Acts were mainly designed to reinforce the regulatory measures relating to cultivation of opium poppy, possession etc. of opium and were the important tools in the hands of the Britishers to support their policies on opium" (Kumar and Tewari, 1989).

The advent of the 20th century brought with it an increased awareness of the dangers of drug usage. International attention focussed on the need for restricting the use of narcotics to medicinal and scientific purposes alone and even so within permissible limits. The international movement culminated in the Opium Convention in 1925 at Geneva, which was implemented in India through the Dangerous Drugs Act, 1930. The Preamble of the Act read as follows. "An Act to centralize and vest in the Central Government the control over certain operations relating to dangerous drugs and to increase and render uniform penalties for offences relating to such operations".

This enactment centralized the control of the offences and operations of the drugs like cocaine and cannabis besides opium. The private export or

import was banned, although licensed cultivation of poppy continued. Sale, possession or transportation without licence was made an offence with two years imprisonment and enhanced sentence with fine on repetition of the offence. Equal punishment was prescribed for the use of place, premises, vessel or vehicle. An attempt or abetment of an offence was also punishable. The Act created a presumption that an offence under the Act had indeed been committed and it was upto the accused to satisfactorily account for possession of any drugs.

The Act aimed at suppressing the contraband traffic in drugs as well as putting an end to the abuse of these drugs. Penalties were increased and made uniform. The Dangerous Drugs Act, 1930, made a radical departure in approach from the earlier Opium Acts. It concentrated on the social aspects of narcotic drugs rather than the revenue aspects, which the earlier enactments had focussed upon.

After independence in 1947 the control of narcotic drugs became the responsibility of the Central government. The Opium and Revenue Laws (Extension of Application) Act, 1950, extended the three Central enactments, ie. Opium Act, 1857, Opium Act, 1878, and Dangerous Drugs Act, 1930 to the whole of India.

However due to increased drug related activity and the globalization and commercialization of drugs, the central enactments were found to be inadequate. The areas in which the law were found lacking are as follows:

- 1) The penalties under the old Acts were grossly inadequate. Maximum penalties were only upto 4 years imprisonment.
- 2) There were no provisions or law in force applicable to psychotropic substances.
- 3) There was a lack of clear definition of offences.
- 4) There were no provisions relating to and specifically for drug addicts.

The penalties, offences and sanctions were not deterring enough to meet the levels of organisation and efficiency of drug traffickers and smugglers. Section 9 of the Dangerous Drugs Act, 1930 prescribed a punishment which could extend upto 3 years, with or without fine for the commission of an offence under the said section. The Act prescribed no minimum mandatory sentence.

Since the passage of the Dangerous Drugs Act, 1930, a number of developments took place internationally, and pressure was put on India to stamp out illicit drug production, consumption and trafficking particularly

from the United States.

In addition, India was a signatory to various international conventions such as the Single Convention on Narcotic Drugs, 1961, Convention on Psychotropic Substances, 1971, and the 1972 Protocol amending the Single Convention on Narcotic Drugs 1961, and the Convention on Psychotropic Substances, 1988, and hence was obligated to translate these Conventions into law.

Further, an increase in addiction and changing pattern of drug use with the introduction of heroin and synthetic drugs, and the increasing use and importance of India as a trafficking route for drugs, posed a serious threat. India did not have any kind of legislative framework to combat and control these substances.

Consequently the Narcotic Drugs and Psychotropic Substances Act, (NDPS), 1985 was passed. The criminological approach of this Act was "deterrence" through stringent provisions. The Act repealed all earlier enactments and served as a clear departure from all the previous Acts. It covered the entire range of narcotic drugs and psychotropic substances and prohibited the use of the same except for medicinal and scientific purposes. The preamble of the Act read as follows: "An Act to consolidate and amend the law relating to narcotic drugs, to make stringent provisions for the control and regulation of operations relating to narcotic drugs, and psychotropic substances, to provide for the forfeiture of property derived from, or used in, illicit traffic in narcotic drugs and psychotropic substances, to implement the provisions of the International Conventions on Narcotic Drugs and Psychotropic substances and for matters connected therewith".

The NDPS Act, 1985, as per section 1 (2) applies to the whole of India. It was enacted by Parliament on 16th September 1985 and was brought into force on 14th November 1985.

The NDPS Act, 1985, provides for a minimum punishment of 10 years rigorous imprisonment plus a fine of Rs 100,000 extendable to 20 years rigorous imprisonment and a fine of Rs 200,000. In respect of repeat offences, the Act provides for death sentence in certain circumstances and in remaining cases, a minimum punishment of 15 years rigorous imprisonment and a fine of Rs 1,50,000, which is extendable to 30 years imprisonment and a fine of Rs 300,000. While providing for deterrent punishments for trafficking offences the Act envisages leniency towards drug addicts.

The persons found to have illegal possession of drugs in “small quantity” (the quantities prescribed for different drugs which would be deemed to be “small quantity” for the purposes of the Act has been laid down by the Central Government) are liable to a punishment upto six months imprisonment or fine or both, which in respect of hard drugs like heroin would be upto one year’s imprisonment or fine or both. However, the court is empowered to, instead of straightaway sentencing the addict convict to imprisonment, release him for undergoing medical treatment for deaddiction on his executing a necessary bond prescribed under the Act (Kumar and Tewari, 1989).

The Act does not specify the term “small quantity” but it is specified by the Central Government by notification in the official gazette of the Central Government vide G.O NO. 827 (E) dated November 14, 1985, as follows.

Nature of the drug	Quantity
Heroin \ Brown Sugar \ smack	250 mgs.
Hashish \ charas	05 Gms
Opium	05 Gms
Cocaine	125 Mgms.
Ganja	500 Gms.
(Official Gazette of Central Government)	

Attempts, abetment and conspiracy to commit an offence are also liable to the same level of punishment as the offences themselves. All offences have been made cognisable. Most of the offences are non-bailable. The Act empowers the officers of various Central and State Government agencies to search, seize and conduct investigations etc. The Act provided for creation of a Central Authority for the purpose of the Act and accordingly a separate agency called “The Narcotics Control Bureau” has been created to enforce the provisions of the Act and coordinate the preventive and repressive measures against drug trafficking all over the country (Kumar and Tewari, 1989).

The Act provides for forfeiture of all illegally acquired properties derived from or attributed to illicit trafficking.

There is relaxation in the rule as well as punishment prescribed to offences related to Ganja. The minimum quantity for personal consumption provided (Section 27) is 500 gms for Ganja, which is more by any standards, as compared to other drugs (Singh 1993).

The salient features of the NDPS Act, 1985, are as follows:

- a) Differentiation between a trafficker and an addict is based on a fixed quantity. If one is found in possession of a quantity less than the prescribed amount and if one is able to prove that such quantity is for personal usage, then one is an addict in the eyes of the law.
- b) Offences and penalties have been created in a structured manner leaving almost no loopholes. The offences range from possession to allowing one's premises to be used for commission of an offence.
- c) The burden of proof is largely on the accused to show that he is innocent.
- d) Various provisions deal with forfeiture of property derived from or used in illicit traffic.
- e) It gives the government the power to establish centres for identification, treatment etc of addicts.
- f) It set up a National Fund for control of Drug Abuse (Kumar and Tewari, 1989).

On the recommendation of the Cabinet Committee constituted for combating drug traffic and preventing drug abuse, the NDPS Act, 1985, was amended by the NDPS, (Amendment) Act, 1988 (2 of 1989). The NDPS (Amendment) Act was enacted by Parliament on 6th January, 1989, and was brought into force on 29th May, 1989. The salient features of the NDPS (Amendment) Act, 1988 can be briefly stated as follows:

1. It expands the Preamble, provides for forfeiture of property derived from or used in illicit traffic in narcotic drugs and psychotropic substances and for implementation of the provisions of the International Conventions on Narcotic Drugs and Psychotropic substances.
2. It provides for the constitution of a National Fund for control of drug abuse, a governing body and for the publication of an Annual Report on the activities financed by such amounts provided the Parliament makes due appropriation of such amount by law, the sale proceeds of any property forfeited under the Act, any grants that may be made by any person or institution etc.
3. A new section 31 A provides for death penalty on second conviction in respect of specified offenders involving specified quantities of certain drugs.
4. It provides that no sentence awarded under this Act (other than section 27) should be suspended, remitted or commuted.
5. It provides that offenses punishable under the Act shall be tried by a Court of Session until a Special Court is constituted under the new Section 36A.
6. Section 36A provides for constitution of Special Courts, its jurisdiction, powers etc.
7. A new section 37 which substitutes three old sections of the Principal Act

provides that every offence punishable under the Act shall be cognizable and non-bailable.

8. A new section 52A provides for pre-trial disposal of seized Narcotic drug and Psychotropic Substances.

9. It provides in section 59 of the Principal Act for sub-section (2) that any officer on whom any duty has been imposed under the Act or any person who has been given the custody of any addict or any person charged with an offence under the Act, and who willfully aids in or connives at the contravention of any provision of the Act, shall be punishable with the same punishment as that awardable to drug trafficking offenders.

10. It provides immunity from the prosecution to an addict volunteering for treatment for deaddiction or detoxification once in his life time. The immunity may be withdrawn if the addict does not undergo the complete treatment for the purpose.

11. A new Chapter has been provided to cover all aspects relating to forfeiture of property derived from, or used in illicit traffic. This Chapter inter alia, prohibits holding of illegally acquired property which has been defined as property acquired from illicit traffic in narcotic drugs or psychotropic substances. It provides for identification, seizure or freezing of illegally acquired property. It further provides for setting up of Offices of Competent Authority to deal with all aspects relating to forfeiture, to appoint officers as Administrators for the management of properties seized or forfeited and an Appellate Tribunal for such property (Kumar and Tewari, 1989).

The Cabinet Committee constituted for combating drug trafficking and preventing drug abuse recommended that additional legislative measures could be provided in the form of preventive detention scheme including all aspects of drug trafficking. Apart from cultivation, production, manufacture, sale, distribution of poppy, cannabis and coca plants, the illicit traffic would also include the abetment and conspiracy towards commission of the offences under the new Act. Cases of embezzlement of the opium produced under license would also be covered under internal traffic. With this backdrop, the Prevention of Illicit Trafficking in Narcotic Drugs and Psychotropic Substances Act (PITNDPS Act, 1988) has been passed in 1988. The Act has the following salient features:

1) The officers specially empowered by the Central and State governments shall be vested with powers to issue orders of detention of any person with a view to prevent him/her from any kind of drug trafficking.

2) With a view to provide legal protection to the orders of detention issued for a person invoking two or more grounds for the detention.

3) The detention order would not be held invalid or inoperative merely by reasons that the person to be detained is outside the limits of the territorial

jurisdiction of the government.

- 4) Suitable provisions have also been made for apprehending and detention of the absconders or whose whereabouts are not traceable.
- 5) In the case of persons absconding, the government may, by order, notify in the official gazette or\and in daily national newspaper, direct such persons to appear before such officer at such place and time, as may be specified and if he fails to so do without sufficient and reasonable cause, he shall be punishable with imprisonment upto 1 year or with fine or both.
- 6) All such offences under the new law have been made cognisable.
- 7) The law also provides for the constitution of Advisory Boards by both the Central and State Governments (Singh, 1993).

It goes to the credit of the policy makers that they have sought to implement India's international obligations in a manner which is in tune with the spirit of the International Conventions.

It has however failed to make a distinction between an addict and a trafficker, i.e. as per section 2(xxviiiia), a distinction between peddler and one who consumes for his personal use has not been clear cut and reflects the overriding concern of the law makers to criminalize all drug related activity with no concern for the addict. This is a severe drawback of this enactment.

Further, the Act does not provide a satisfactory distinction or sufficient discretion in sentencing between the type of drug being used or sold, the circumstances surrounding its use, between consumption for personal use, addiction, small scale peddling and large scale national or international trafficking.

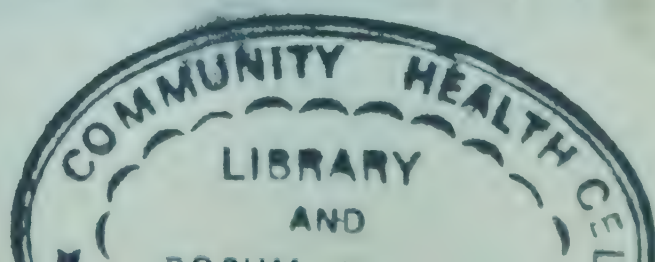
Cultural and traditional use of drugs cannot be legislated out of existence. Change in behaviour can only come from education, information and encouragement of alternative patterns of cultural behaviour.

The Act fails to strike the right balance between health goals of reducing drug abuse through preventive, treatment and rehabilitative strategies and the aims of criminal sanctions to reduce drug abuse through deterrence coupled with limited scope for treatment and rehabilitation. The cost of keeping addicts in prison for ten years would work out more than the use of preventive strategies and rehabilitation and treatment programmes.

The Act cannot be enforced in practice. If all cannabis users were swept into jail, the prison service would collapse (Allamby 1993).

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While enforcing the Act, a right balance has to be maintained, between large scale trafficking and the major dealers, and a recognition that some drugs are more harmful than others.

The NDPS Act, 1985, has provided for a large number of authorities functioning under the supervision of both the Central and state Governments primarily with a view to cover every nook and corner of the country. But the enforcement of the act has been generally poor in most parts of the country (Rao 1993, Singh, 1991).

Enforcement Agencies in India

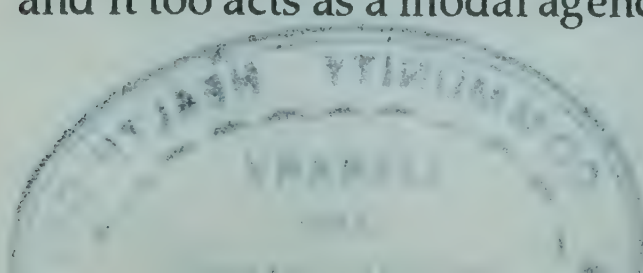
Narcotics Control Bureau (NCB)

Under section 4(3) of the NDPS Act, at the national level, Narcotics control Bureau, headed by a Director General, with different Zonal offices in Bombay, Calcutta, Delhi Varanasi and Madras has been constituted as not only an enforcement agency but also as a national nodal agency for internal and international co-ordination and co-operation in matters of enforcement action against and prevention of drug trafficking. It has been given a wide charter of functions including investigation of drug offence cases of intranational, and international ramifications and collection, collation and dissemination of intelligence both at national and international levels. It is also responsible for building up a national information system for developing policy inputs and for identifying the areas of weakness in investigation, prosecution and for suggesting remedial measures including legislative improvements. It arranges in collaboration with Central, state and international training institutes, for training of enforcement officers of various central and state agencies with a view to imparting momentum to innovation and latest techniques in drug law enforcement. It is also responsible for the implementation of obligations in respect of counter measures against illicit trafficking under International convention, protocols and treaties to which India is a signatory.

Central Bureau of Investigation (CBI)

The Central Bureau of Investigation has been empowered to collect intelligence, make seizures, and conduct investigations under the NDPS Act 1985, throughout the country. A branch of CBI deals exclusively with cases of narcotics and counterfeit currency.

The NCB Interpol in India is a part of the Central Bureau of Investigation and it too acts as a modal agency, inter alia, for reception and transmission of



drug related offences.

Territorial Enforcement Coverage

Realizing the magnitude of the problem in the context of India's size, long land borders and sea coasts, the Government of India has adopted a multi enforcement agency approach in order to provide intensive and specialized enforcement coverage to the vulnerable borders with Pakistan, Nepal and Myanmar the long coast lines and the international exit points by air in the four metropolitan cities of Bombay Calcutta, Delhi and Madras.

On the Indo-Pak border, the Border Security Force, being the first line of defence, has been empowered under the NDPS ACT for conducting search, seizure, and arrest and also for patrolling the border to apprehend drug traffickers.

The officers of Customs and Central Excise Departments have also been similarly empowered. With the support of the Coast Guards, the customs are already active in the coastal area and their efforts are being supplemented by the State Police and other agencies in the concerned states. Similarly, the Assam Rifles and BSF have been empowered for search and seizure on the North - Eastern border.

In the three states of Madhya Pradesh, Rajasthan and Uttar Pradesh, where opium is cultivated under licence on behalf of the Government, the Central bureau of Narcotics provides for intensive enforcement.

The state police forces have by their inherent jurisdiction to investigate any (cognizable) crime, have full powers under the act. Further, Narcotics Cells in Customs and Central Excise collectorates, Police organizations have been created (CBI Bulletin, Feb. 1992).

The Forensic Science Laboratories in India are playing a vital role of assisting the investigating agencies connected with the investigation of cases under the NDPS Act. The Forensic Laboratories are broadly in two areas. 1) Identification and 2) Quantification of the drug sent for analysis. The quantified reports throw light on the quantum of the parent drug as well as the dilutant which will have a direct bearing on 1) the origin of the drug and 2) classification of the person who possess the illicit drug whether belonging to a group of either being manufacturer, dealer, retailer or peddler. This aids the investigating agency to trace the pathway of illicit trafficking.

Development of International Law on Drug Control

The world wide increase in drug abuse and drug trafficking has led to global concern and responses. At the international level a number of conventions have been signed and a global control mechanism has evolved.

In 1909 the first attempt to limit the shipping of narcotic drugs were made. International drug treaties which were concluded between 1912 and 1972 provide the legal basis for the present international drug control system. The operation of the international system rests on the concept of national control by individual states within the limits of their jurisdiction in complete compliance with the provisions of the international treaties. Each state, which is a party to a particular treaty is bound to adopt appropriate legislation, introduce necessary administrative and enforcement measures and cooperate not only with other countries but also with the established drug control organs.

In 1909, thirteen nations came together at Shanghai for the first International Conference on Narcotic Drugs, which came to be known as the Opium Commission. The first drug control treaty, The International Opium Convention, was signed, governing the shipment of narcotic drugs, in 1912 at The Hague.

The first Assembly of the League of Nations in 1920 established an Advisory Committee on Traffic in Opium and other Dangerous Drugs to assist and advise the League's Council on the subject. 3 main conventions were developed under the auspices of the League.

The Second International Opium Convention signed in 1925, which led to the establishment of the Permanent Central Narcotics Board to supervise the control system introduced by the Convention. A system of import certificates and export authorisations for licit international trade in narcotic drugs was introduced. In 1931, a compulsory estimates system was introduced by the Conventions for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs with the object of limiting the world manufacture of drugs to the amounts needed for medicinal and scientific purposes. In order to control illicit drug trafficking, the 1936 Convention for the Suppression of the Illicit Traffic in Dangerous Drugs was signed. It called for severe punishment of illicit drug traffickers.

In 1946, the United Nations assumed the responsibilities of the drug control formerly carried out by the League of Nations. The functions of the League's Advisory Committee were transferred to the United Nations

Commission on Narcotic Drugs established in 1946 as a functional commission of the Economic and Social Council.

By the 1946 Protocol, the international community restated its firm commitment to maintain control over the addictive drugs.

The protocol of 1948 brought under international control a number of synthetic compounds that emerged after the second world war. These compounds were outside the scope of the 1931 Convention.

The 1953 Protocol for Limiting and Regulating the Cultivation of the Poppy Plant, the Production of International and Wholesale Trade in and Use of Opium, was signed at New York. Apart from limiting opium use and trade to medical and scientific needs, it placed controls on opium stocks that countries could maintain legally. The Single Convention on Narcotic Drugs, signed in 1961, consolidated most of the earlier international instruments. This Convention terminated all the earlier treaties. The Single Convention was further strengthened by the 1972 Protocol amending the Single Convention. The international apparatus for drug control was extended to all narcotic substances. The International Narcotics Control Board, (INCB) was established. In addition to existing controls on the cultivation and growth of crops from which drugs are derived, new controls were brought into effect. New obligations relating to the treatment and rehabilitation of drug addicts were introduced.

The salient features of the Single Convention on Narcotic Drugs, 1961 as amended by the 1972 Protocol Amending the Single Convention on Narcotic Drugs, 1961 are as follows:

- a) States are to limit the production, manufacture, export, import, distribution of, trade in, use and possession of drugs to medicinal and scientific purposes.
- b) States are to organize and control the production of opium.
- c) Manufacture of drugs, trade and distribution is to be under licence only. d) Cultivation, production, manufacture, extraction, preparation, possession, offering, offering for sale, distribution, purchase, sale, delivery, brokerage, dispatch, transport, import\export of drugs contrary to the Convention are to be made punishable offences.
- e) States are to give special attention and to take practicable measures for prevention of drug abuse and for early identification, treatment, education, after care, rehabilitation and social integration of drug abusers.

The Convention on Psychotropic Substances, 1971, expanded the drug control system to include hallucinogens, such as LSD and mescaline, stimulants such as amphetamines and sedative-hypnotics such as barbiturates. The

salient features of the Convention are:

- a) Psychotropic substances are to be limited to use for medical and scientific purposes alone, through licensing or otherwise.
- b) Most of such substances are to be made available only on prescription by a medical practitioner.
- c) States are to take all practicable measures for the prevention of abuse of psychotropic substances and for the early identification, treatment, education, after care, rehabilitation and social integration of addicts.
- d) Action contrary to the Convention, if committed intentionally is to be made an offence.

The sharp increase in the drug problems by the end of the 1970s resulted in "International Drug Abuse Control Strategy", formulated by the General Assembly. A five year action plan (1982-86) was envisaged by means of a six point strategy. Among other things, the recommended steps included funding income-producing alternatives for illicit drug traffickers.

The 1984 Declaration on the Control of Drug Trafficking and Drug Abuse described drug trafficking and abuse as "an international criminal activity demanding urgent attention and maximum priority". The Declaration sought to combat drug related activities through collective state action involving all moral, legal and institutional means.

The 1987 International Conference on Drug Abuse and Illicit Trafficking was attended by representatives of 138 states. The Conference adopted by consensus, recommendations for a broad range of measures to address the entire drug abuse phenomenon. Guidelines for dealing with the reduction of both supply and demand of illicit drugs, as well as the suppression of illicit trafficking were adopted by the Conference under the title "Comprehensive Multidisciplinary Outline of Future Activities". Continuing its role in international fight against the plague of drug abuse, the United Nations convened the Conference of Plenipotentiaries which led to the adoption of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988. This convention is a comprehensive operative international law directed specifically against illicit traffic in drugs. One of the salient points of the Convention concerns the tracing, freezing and confiscation of proceeds and property derived from drug trafficking. To that effect, courts are empowered to make available or to seize bank, financial or commercial records. Further, it provides for extradition of major drug traffickers, mutual legal assistance between States on drug related investigations, and the transfer of proceedings for criminal prosecution. Another significant provision is the commitment of parties to eliminate or reduce illicit demand for narcotic drugs

and psychotropic substances.

International Co-operation

India has co-operated with other countries in order to contain the problem of trans-border movement of drugs.

Bilateral meetings are held regularly with neighboring countries, i.e, Pakistan, Nepal and Sri Lanka on drug related matters.

Joint committee have been set up between India and Pakistan on drug matters. Nodal authorities have been designated for exchange of operational information in India and Pakistan. A bilateral agreement has been worked out with Afghanistan and Mauritius India has agreed to extend cooperation to Nepal, Burma and Thailand for curbing drug trafficking.

A Technical Committee on Drugs under South Asian Association of Regional Cooperation (SAARC), has been established.

India is a signatory to all international treaties and conventions on narcotic drugs and psychotropic substances and has ratified the three principal UN Conventions of 1961, 1971 and 1988. India is also a member of the UN Commission on Narcotic Drugs, the Heads of National Drug Enforcement Agencies (HONLEA) for the Far East Region as well as a member of the Sub-Commission for Near and Middle East. An Indo-US Working Group on Narcotic Drugs has been set up. Drug liaison Officers of USA, UK and West Germany besides Canada based in India work in close co-ordination and liaison with the Narcotics Control Bureau.

India also works in close liaison with the INTERPOL \ ICPO, Customs Cooperation Council, International Narcotics Control Board, UN Division of Narcotic Drugs resulting in seizures at far off places like Rome, Lagos, New York, Amsterdam and Tokyo (CBI Bulletin, Feb.1992).

Drug Situation in Karnataka

The 1991 census of India, puts the population of India, as 843,930,861 and the population of Karnataka, as 44,817,398. The population of Karnataka thus constitutes 5.31% of the population of India. In 1991, according to the census, the population of Karnataka has increased by 7,681,681 over that recorded in the 1981 census. This represents a growth rate of 20.69% in just 10 years. Bangalore, the capital of Karnataka state, has a geographical area of 2,191

Sq kms and a population of 48,25,961 and is one of the fastest growing metropolis' of India. Its population has increased by 75% over the last 10 years and its slums by 85% due to migration from rural areas. Media and official reports have pointed out that drug use has increased considerably in Bangalore based on seizures of drugs, though definite figures are not available.

Bangalore has become a strategic centre for drug trafficking in the south of India. It has become a transit cum consumer point between Bombay and Goa on the one side and some areas of Tamil Nadu on the other (Rao 1993). Illicit cultivation of ganja in the rural tracts surrounding Bangalore is also compounding the problem. The drug consignments are booked or couriered to Bangalore from Delhi or Bombay. Bangalore is also used by traffickers as a transit point, from where the drugs are taken to other places in the south, such as Madras and other towns close to Tuticorin ports like Thiruchirapalli, Thirunelveli, Kanya Kumari and Thiruvananthapuram, leading to Sri Lanka. The growing tourist traffic in Karnataka, Tamil Nadu and Kerala has resulted in easy access to the movement of drugs (Rao 1993). Heroin, (Brown sugar) is smuggled into Bangalore from Bombay, Goa and Tamil Nadu. Cannabis is brought to Bangalore from Kerala and Tamil Nadu where it is grown extensively. Drugs from Hyderabad reach the city by bus or train and from Bombay by trains, trucks or buses. It is in turn supplied to retailers mainly dhabhas on the outskirts of the city, and then distributed to the local dealers (Rao 1993). Ganja is supplied to the retailers in packets of 50 gms at prices ranging from Rs.3,250-3500 per Kg. Subsequently the contents in 50 gms packets are repacked into 5 gms packets by them and the retail price is fixed to earn a minimum of Rs. 10 per pack of 5 gms.

Pedlars sell 20-35 packets a day. Their clients include students, casual workers etc.

Brown sugar is sold for Rs.300 per gram in Bangalore and is usually adulterated with white flour (maida) and rat poison. Tidegesic is sold for Rs. 14-40 in Bangalore. Tidegesic is easily available without prescription. Supplies of Tidegesic come from Ananthapur, Chittor and some parts of Tamil Nadu.

Most pedlars and kingpins are known to belong to a particular minority community, who because of lack of education and poverty get involved in peddling. Many women are involved in drug peddling in Bangalore. Drugs are sold in dhabas, pan shops, petty shops located near police stations, railway stations, cinemas etc. They are sold in innocuous kiosks of the road side in almost all places in the city. Shivajinagar, Fraser Town, Cox Town, Banaswadi, Kamanahalli, Jayanagar, Koramangala and host of other places are mentioned by drug addicts and pedlars, from where drugs can be easily bought.

The drug mafia of Bombay, which was inactive since 1988 following the central government's decision to initiate stringent measures against drug smugglers, have regrouped again to revive lost contacts. At least 4 cartels operating from Bombay have shifted their bases to South India, where they are provided operational support by LTTE. At the natural landing and dispatching points the innumerable landing agents operate in league with the LTTE. After the bomb blasts in Bombay, in February 1993, and the ensuing intensified drive against smugglers and other anti social elements, the drug smugglers have made the South their headquarters. Mangalore which has a long coast and which is well connected by road to most places has become the hub of drug smuggling in Karnataka. Dharwad, and Belgaum are also mentioned as other places from where drugs are brought into Karnataka state.

Steps taken in Bangalore

In Karnataka, Narcotic Drugs Cells were created in Corps for Detectives with subcenters at Bangalore, Mangalore and Belgaum in 1992. Laws relating to drugs have not been enforced in a sustained manner. As against 127 cases reported in 1990, 90 cases were reported in 1992 and 80 cases in 1992. Most of the cases detected in the state of Karnataka pertained to the seizure of Ganja and Ganja plants. While the activities for NDPS provides an active and wide networks for enforcement agencies throughout the country, in Bangalore, only 3 agencies are involved in seizures of the drugs i.e. Customs, police and State Excise departments. The Directorate of Revenue Intelligence, and the Drug controller of Karnataka have not seized any drugs for a long time though the illegal supply of drugs to chemists continues unabated. The Bangalore Customs has seized 1 Kg of Heroin and 4 Kgs of Ganja, in 1990-91. There have been minimal seizures of drugs in 1991-1992 (Table V1).

The police department has been more successful compared to the other two departments in combating drug trafficking in Bangalore city. In the year 1992 the Bangalore police seized 605.72 Kgs. of Ganja as compared to 1991 ie. 47.77 Kgs. The seizures of brown sugar showed an increasing trend with 11.24 Kgs in 1992 and 0.860 gms in 1993 (till September). The seizure of opium too showed an increasing trend, with 0.900 gms of opium being seized in September 1993. But the seizures of other drugs have been almost nil.

The Customs department has seized opium weighing 21.5 Kgs in the year 1988 and approximately 9.5 Kgs of heroin from 1988 to 1990. In the case of ganja, in 1986 it recorded a maximum seizure of 100 kgs.

Police department sources attribute their inability to nab drug pedlars to inadequate personnel. But it was found that the police officers are often not aware of the NDPS Act, 1985 and have been only marginally successfully in nabbing drug pedlars. According to the statistics from the Inspector General of Prisons Karnataka, a total of 60 persons were in prisons in Karnataka till 21.9.1993, under the NDPS, Act 1985. Out of these, only 12 have been convicted to date, and 48 are undertrials. Out of these 60 arrests, 58 are male and 2 female. Since 1989, 40 persons have been prosecuted in the civil session courts under the NDPS Act, 36 were acquitted as the prosecution failed to provide reliable evidence.

Corruption among police, government officials and local politicians is widely alleged but seldom proved. Competing and occasionally overlapping jurisdiction of law enforcement agencies continues to hinder effective action against traffickers.

Trends:

Though drugs have been used in India from ancient times, the problem of drug abuse is a relatively recent phenomenon. Drug abuse appears to be a product of a complex interaction between man and his socio-cultural environment.

Despite some encouraging developments at the national and regional levels, the drug abuse situation remains grim. Illicit production, trafficking and abuse of drugs together with attendant violence, and corruption, continues to imperil public health, by taking a heavy toll in human lives and productivity. It also threatens political institutions and undermines the economy. Interlocking criminal trafficking organizations, which are well planned, and heavily armed continue to produce and smuggle enormous quantities of drugs. The drug control laws have not been effective in controlling drug peddling in India.

ANALYSIS OF CASE STUDIES

Objectives

1. To monitor trends in the nature and extent of drug abuse in the population in contact with different institutions.
2. To describe certain personal and situational characteristics of the reported addict population.
3. To identify and describe groups at risk.
4. To get information regarding the course of addiction and the impact of contact with different institutions.

Case records of drug abusers registered at different hospitals, clinics, counselling and rehabilitation centres were scrutinized and analyzed in terms of different parameters.

The analysis of registered cases over time assembled from different centres, gives a picture of the drug phenomenon and provides an overview of patterns and trends in drug abuse over time. This technique helps to determine the extent and pattern of drug abuse, identifies drugs currently being abused, the detection of new abuse entities and new combinations of drugs, new routes of administration, relative hazards to health and relative hazard potential of substances.

This technique also helps in describing the characteristics of persons who develop particular drug problems and hence helps in identifying the high risk groups. This information may be used to build up a statistical profile of the high risk individual. It further facilitates inclusion of information on heavy users of drugs, a group of persons often missed by surveys, since this group comprises casualties of drug use and consumes most of the treatment and rehabilitation resources. Hence characteristics of this group are of considerable use to demand reduction planners. Valid and comprehensive information on drug use including sociodemographic characteristics is vital if we are to clearly understand the scope and distribution of these behaviours in our society and work effectively in reducing their prevalence.

Information on socio-demographic differences in both the prevalence and trends of drug use, are important in the formulation of policies required to deal with this problem. Basic information on their behaviour is necessary for the planning of prevention and treatment programmes and may be useful in assessing and anticipating the impacts of policies and broad social trends. This information may also make an important contribution to

our understanding of the social etiological factors that underlie drug use.

Further, it is pointed out by some researches that the number and nature of cases in contact with the hospital and other agencies is an indication of the total number of cases in the community and that changes in the former, indicate changes in the latter. However, this group does not necessarily represent the whole population of drug users. There may be a segment of drug users who have reached a crisis point in their habits or have a very high motivation to stop. The experimenting drug user is unlikely to be seen in such data. However such a sample provides an excellent guide to the geographical and social distribution of drug using practices.

Method:

Different hospitals, rehabilitation and counselling centres offering help to drug abusers were contacted and permission requested to scrutinize the case records for relevant details of clients registered at these centres. They were assured that the complete confidentiality of the data recorded would be protected and the information collected would not be used for any other than the originally agreed upon purpose.

Most of the centres did not maintain records and it was observed that the treatment centres did not have a standardized and systematic method of recording data. In some centres retrieval of case files was not possible as records were not kept systematically and correctly coded. Some centres refused permission to scrutinize the patient records. Hence records from 2 hospitals and one counselling centre were collected from 1972 to March 1993. It was also observed that different centres recorded information differently and all required information was often not recorded in all case files. Very often details noted were cursory. The different types of drug dependence cases were coded together without distinction and hence it was not possible to know which drug was being used.

A major problem encountered in this technique was in identifying duplication of cases. This problem is greater with drug abuse than in other conditions, as drug abusers frequently use aliases or give false addresses. They further have a tendency to seek treatment from more than one centre. This problem was minimized by checking the addresses, date of birth and other socio-demographic details. Detected duplicate cases were omitted from the analysis. The total number of cases studied was 772.

Only the common parameters on which all the centres had data, was

analyzed. This included: age, sex, occupation, religion, education, locality, drugs abused, age of first use, initiating factors, reasons for use, maintaining factors, length of usage, previous hospitalisation, treatment and follow up.

Results:

This is a concerted effort to examine the relationship between a number of sociodemographic characteristics and drug use. Rather than provide extensive interpretation or narrowly focussed analyses, this is intended to provide a descriptive and comprehensive overview of the socio-demographic patterns of drug use of registered cases at different treatment centres.

With the exception of barbiturates and cannabis, it is apparent that the use of all of the other drugs was minimal until the mid eighties. The peak year for drug use of all categories was 1992, with 18.9% of total drug users being registered at different treatment centres. Multiple drugs are being abused more than single drugs, with 46% of total drug users being multiple drug users, followed by cannabis (22.8%). The introduction of heroin (brown sugar) is of comparatively recent origin (1982), but has overtaken and outstripped the traditional drugs like opium. Though opiates were minimally used before 1982, their use increased steadily from 1987 to 1990, and its use peaked in 1992. The main opiate that is being abused is Tidegesic (Bruprenorphine). The number of cases of tranquilizer abuse peaked in 1992, whereas the use of Barbiturates\sedatives peaked in 1991. Though cannabis was being abused from 1972, it reached its peak in the late eighties. The cases of multiple drug use rose steadily from 1975 and in 1991 there were maximum number of cases of multiple drug use (13.5%). (Tables in appendix 1)

There is a noticeable increase for all types of drug use around the early eighties, which has reached its peak in 1992. For 1993, cases were collected only upto March. As can be seen in the table 8, for all of the drug categories there is a definite increase in all categories of drug use in the last 5 years.

The small entries in the Table 8 (a) for some drugs for some years, does not mean that these drugs were not being used in Bangalore. Such an inference could be drawn only if the respondents had been selected from the general population. The low rates of incidence in the earlier years do not necessarily mean that incidence rates were low in the population in those years.

In Table 8 (j) data are presented on the use of drugs of different classes. Multiple drug use ranks first, with, 46.11% having used them. Cannabis is the second, with 27.33%, and heroin\brown sugar third, with 11%, tranquilizers

Marital Status:

As regards marital status, with the exception of tranquilizers, all other drug categories show the same pattern. The percentage is lowest for the married. A reversal occurs for tranquilizers, as more number of them are married than single. The reason for this could be that there were more number of housewives abusing tranquilizers than other drug categories. In general, married persons tended to abuse single drugs more than multiple and more married persons tended to abuse cannabis and opium than heroin.

Socio-economic status:

Data was available for only 319 cases for socio-economic status. Drug users belonged to all socio-economic classes. Persons from upper socioeconomic classes tended to abuse opium significantly more than cannabis, opiates and barbiturate\sedatives. Similarly, persons belonging to upper classes also were more likely to abuse heroin compared to cannabis.

Age of initiation of drug use:

As regards the age of initiation, 92.73% of all categories of drug users had started taking drugs before the age of 35, and 63.85% before the age of 23 years. 42.1% had started taking drugs between 18 and 23 years, 20.85% between 12-17 years and 0.9% below 11 years. Tranquilizer abusers had started taking drugs significantly later than cannabis, heroin, opiate and multiple drug users. Multiple drug users initiated drug use significantly earlier than single drug users.

Length of drug usage:

As regard length of usage, 66.19% of the total sample of drug users were using drugs for less than 5 years, and 25.5% were using drugs for 6-11 years.

Initiating factors:

Numerous reasons were given by the respondents and more than one reason was given by some respondents hence the percentages work out to be more than 100%. The most common initiating factors mentioned by the respondents were, peer pressure, (49.55%), curiosity and experimentation (13.29%), to overcome depression or loneliness (10.47%), family problems (5.52%), "for kicks" (6.08%), etc. The same trend was observed for all drugs. It is obvious that peer pressure is the most important cause for initiation into drug use.

Maintaining factors:

Information was available for only 240 cases. From the available information on maintaining factors, the most commonly cited are as "for kicks" (12.9%), to avoid withdrawal symptoms (5.5%) craving (2.1%), family problems etc. To avoid withdrawal symptoms have been cited more frequently by persons abusing heroin and opiates than other categories of drugs.

Site of Use:

As regards place of use, the most common places mentioned were, college campus, streets, friend's residence, parks, bars and restaurants.

Previous Hospitalization:

34.06% of the total drug addicts, were hospitalized previously for detoxification. Among the different drug categories, the highest percentage was for multiple drug users (43.3%) and the least, for heroin users (22.2%). 57.09% of the cases for whom information was available were on regular follow up. The maximum number of drop out was for heroin (60.53%).

Trends:

The sociodemographic variables identified as the strongest correlates of drug use are age, sex, education, occupation and employment status. The prevalence of use for all drug categories among the younger age groups was several times greater than that observed for adults aged 35 and older. Similar differences are observed when males are compared to females. Other strong predictors of drug use include marital status with unmarried persons abusing drugs more than the married. The educational background is strongly related to drug use, with a clear trend toward less use of drugs with increasing education. Employment status of drug abusers reflects higher prevalence of drug use among students and the unemployed.

The most cited initiating factors for drug use were peer pressure, curiosity, experimentation and to overcome depression. The maintaining factors, included overcoming withdrawal. A very high percentage of drug abusers drop out of treatment, and a small percentage get admitted to hospitals for detoxification.

INTERVIEWS WITH ADDICTS

The data derived from case histories was complemented by interviews with drug addicts. The objectives were:

1. To determine the nature of drug abuse
2. To study the situational and personal characteristics of drug addicts.
3. To identify and describe groups at risk.
4. To get information regarding the course of addiction.
5. To assess the social, economic and health consequences of drug abuse.

The drug addicts registered at St. John's Medical College Hospital were contacted either through telephone or by letter and were asked to come for a follow up. Other addicts were contacted through known addicts who put us on to other addicts (snow balling technique). 35 drug abusers were interviewed with the help of a semi-structured interview schedule.

The interview schedule was developed to elicit information in terms of the following parameters: socio-demographic data, family background and relationships, ways of disciplining and problem solving, religious activities, leisure time activities, personal relationships, drug history, causes of drug use, economic aspects of drug use, effects of drug use, drug treatment history, needs assessment and opinions and suggestions.

The interview schedule was developed with the help of similar instruments used in previous studies. The interview schedule was translated into Kannada, the official state language. The interviews were held in both English and Kannada.

The nature and purpose of the study was first explained and the subjects were assured confidentiality of the information given.

Results:

Sociodemographic factors:

Drug abuse is by and large a male phenomenon, with all the drug abusers interviewed being male. (Tables in appendix 1).

The sample was predominantly from an urban area (97.1%).and had an average age of 32 years at the time of the interviews. The lowest age was 19 years and the highest 45 years. It is apparent from the above table, that

60 % of the drug abusers belonged to the age group of 25-34 years, at the time they were interviewed. Drug abuse appears to be an affliction of youth, with prevalence decreasing with age.

Drug abusers were more likely to be single. Out of 35 respondents 62.9% were single and the remaining 37.1% were married. Majority of the respondents, 19 out of 35 (54.3%) were Hindus, followed by Christians (40%). The higher percentage of Hindus in the sample is in keeping with the higher percentage of Hindus in general population.

The educational attainment of the respondents on an average was 10 years of formal schooling. 25.7% were educated upto SSLC, 22.9% had completed their Pre University, 11.4% were school dropouts, mainly due to their drug habit. Only 17% had completed their graduation and 2.9% postgraduation. 20% had technical diplomas.

Educational status is strongly related to drug use with persons of lower levels of education being more likely to have used drugs. On the whole drug use among college educated is less than high school educated. Although drug use was slightly lower among high school drop outs, current use was greatest among those who had school education. The next highest figure is found among those with some college education (PUC). Once the drug habit sets in, it discourages further studies. Hence, the higher percentage of addicts amongst high school educated.

The occupation of the respondents was based on the respondents' most recent job. 3\4 of the drug users were in regular employment, one was a part time worker, and one was a student at the time of data collection. The rest were unemployed. A higher prevalence of drug use was found among those who were unemployed (25.7%) or in business, (22.9%). 17.1% were holding managerial and professional jobs, 14.3% were unskilled labourers 14.3% had skilled jobs. It is noteworthy that unemployed, unskilled and those who were self employed were more likely to abuse drugs. Only one was a student, at the time of data collection.

28.5% were employed for a period of 1-5 years and 22.9% for 6-10 years. 5.7% were employed for less than a year. 5.7% for 11- 15 years. Students and unemployed persons were dependent on the income of their families while the rest of the respondents were financially self sufficient.

As regards the socioeconomic background of the subjects, 42.8%

belonged to upper socioeconomic status, 28.6% belonged to middle and 28.6% to lower socio-economic backgrounds. 71.4 % of the respondents had an extra wage earner in the family, besides themselves. The average income of the family of the respondents was Rs.3000-4000.

The respondents were asked to name the city where they had lived most of the time up to age 15. This age was chosen because it was approximately an age when most drug use might be expected to have started. The size of the city is directly related to drug use. 85.7% had lived in large cities. As far as the residence of the respondents is concerned, 51.4% were permanent residents of the locality where they were residing at the time of the interview. For the remaining 48.6% duration of stay varied from a few months to over 25 years. 51.4% of the respondents had lived in Bangalore since birth. It may be added that 62.9% were living in their family homes, 37.1% were in rented houses. 71.4% were living with their parents, 11.4% were at the rehabilitation centre, 15.3% were living with either their guardians or relatives and the remaining 2.9% were living in hostels at the time of the data collection. Majority of the respondents were brought up in independent homes (82.8%), 5.7% in apartments, 2.9% each were brought up in either huts or row houses.

Of the 35 respondents, 27 respondents reported that their parents were alive. Almost all the subjects spent their early lives with their parents, with 27 with both father and mother, and 7 with mother alone and 1 with father alone. A majority of drug abusers hailed from nuclear families (85.7%) as compared to joint families (14.3%), having on an average 3-4 members (34.3%). 74.3% had studied in private schools and 80% had English as their medium of instruction. Of those who attended college, 34.3% had taken up science, 20% commerce and 11.4% arts subjects in college.

Family background

31.4% of the fathers were employed in managerial or professional jobs, 34.3% were in business, 11.4% were unskilled and 14.3% were employed in skilled jobs, 5.7% were holding clerical jobs and 2.9% were in the military. 65.7% of the mothers were housewives 11.4% were unskilled labourers, 11.4% were in business and 5.7% were either holding clerical, professional or managerial jobs.

38% of the drug users reported that their fathers smoked, 34% that they drank alcohol and 2% that their fathers used drugs, whereas 73.7% of the mothers of the drug users, did not smoke, drink nor use drugs. 7.9% reported that their mothers smoked, 13.2% that they drank alcohol occasionally and

5.3% that they chewed paan.

2.9% of the respondents reported that their fathers were treated for alcohol problems. Only 17.1% of the brothers of the respondents used alcohol, 8.6% drugs and 28.6% smoked tobacco. 2.9% of the respondents reported that their sisters consumed alcohol occasionally. 68.6% of the respondents reported that the relationship between their parents was harmonious, whereas 20% reported that it was indifferent and 11.4% that it was hostile. As regards the interpersonal relations between the respondents and their parents, most of them, i.e, 68.6% reported harmonious relationship, whereas 11.4% reported hostile and 20% indifferent relationship. Similarly, the relationship between the respondents and their siblings on the whole was cordial and harmonious, with only 20% expressing disturbed relationship. A large percentage (74.3%) of the drug users reported that their parents were interested in their careers (74.3% fathers and 88.6% mothers). 51.4% of the respondents reported that their fathers were strict with them while only 37% of their mothers were strict .

32.1% reported that their parents scolded them, 21.4% that they beat them and 25% that they advised them and 9.5% that their parents were generally encouraging when they were growing up.

57.1% reported that they did not take their parents into confidence nor sought their advice. On an average, 28.6% were in touch with 3-4 of their relatives whereas 17.1% did not have any contact with their relatives. A majority of 69% reported that when they did spend time with their relatives, they got along well with them, or enjoyed being together, talked openly and helped each other. Only 30.2% reported that there were arguments, fights or disagreements.

The respondents were asked whether their parents were aware of their drug habits, and if yes, what was their reactions. 74.3% of the subjects reported that their parents knew about their drug habit, and 34.9% reported that they were angry, 14% shocked, and 25% tried to help them and 11.6% that they stopped their pocket money. The addicts reported that they kept it a secret from their parents because they feared that they might stop their pocket money (10%), or because they felt guilty about their habit (10%).

Academic background

Majority of the drug users had a good academic background with 8.5% getting distinctions and 40% passing in the first division in the last examination. Only 11.4% had failed.

47.7% of the drug users did not participate in any extracurricular activities while in school\college. 25% of them took part in debates, 22.7% took part in essay competitions. 58.8% took part in sports and games and 21.6% were members of the National Cadet Corps, while in school\college.

Leisure time activities:

77% reported that they had some hobby or other and their hobbies ranged from such diverse interests as reading (23.6%), listening to music (22.2%), seeing movies, (15.3%) etc. On an average, 28.5% spent about Rs.10-50, on hobbies, and 11.4% spent about Rs 300 and above. 51.4% got money from their parents, 22.9% from their own earning, whereas 22.9% reported that they did not have any source of pocket money.

Religious background:

All respondents reported that they came from families which had some religious affiliation. Most of them had attended some religious meeting or activity while growing up. But 11.4% reported that they had not attended any religious service or participated in any religious activity in the past 12 months and 80% of them reported that they did not at present practice their religion.

Peer relations:

On an average, 15.7% the respondents reported that they had 4-6 friends both male and female. 35.7% reported having 10 or more friends, whereas 34.3% reported that they had no friends. 57.1% reported that they dated regularly and 14.3% wished that they had more friends, than they had at present. 79.2% of the respondents reported that their friends too regularly used drugs and 16.7% that their friends peddled drugs, besides using them. On an average, they spent 11 hours or more a week with their drug using friends. 51.4% spent almost all their free time with drug using friends, whereas 28.5% spent almost half their free time with their friends. 77% saw their friends almost every day 5.7% about once a week, 2.9% 2-3 times a month. The most frequent meeting places were private parties, (11.3%), bars and pubs (16.4%) streets (9.8%) parks (14.8%), and home (11.3%). 45.7% preferred meeting their friends any time of the day, 28.6% in the evenings, and 11.4% all day long. Most drug users reported taking drugs together as the primary reason for meeting, 22.7% for exchanging information and selling drugs etc.

Drug History:

A high proportion of addicts (71.43%), interviewed were taking more than one drug generally graduating from a less potent to a more potent drug. 28.6% were using only one drug, mainly cannabis (22.8%). The most commonly abused drugs were cannabis, heroin and tidegesic. Some of the abusers had used as many as 10 or more drug combinations. The most common combinations were cannabis (ganja), tidegesic and heroin (Brown sugar). 34.3%, were simultaneously using alcohol with other drugs. 46.8% smoked tobacco, whereas 6.25% used beetle leaf along with other drugs.

The most common reason given for abusing more than one drug was that one drug did not give the desired effect (47.1%). 41.2%, gave curiosity as to the effect of a combination of drugs, whereas 5.9% gave easy availability of drugs as the reason.

40% of the respondents primarily abused heroin, 22.8% cannabis 20% tidegesic, 5.7% morphine. 2.9% phensidyl, 2.9% cocaine, 2.9% were on prodromes and mandrax each.

Most users had consumed the drugs in more ways than one. The most common methods of ingesting the drugs were by smoking (26.5%) and sniffing (Chasing, inhaling) (26.5%), followed by injecting (21.4%) and swallowing, (eat, chew and drink) (25.5%).

Different routes of administration were associated with various drugs. Almost everyone who used cannabis smoked it and a few had it in liquid form (Bhang). All users of sedatives \ Barbiturates \ Tranquilizers took them orally. Smoking was frequently reported for heroin, but sniffing and injecting (mainlining) were also reported for heroin. Most of the heroin \ pethedine \ tidegesic \ morphine users had used needles and this involved main lining, more than intramuscular or subcutaneous injections.

57% had used needles sometime or the other to shoot drugs, and 22.8% had shared needles with others. 85.7% of the respondents were aware of the risk of contracting AIDS by sharing needles and 77% were worried about contracting AIDS.

51.4% of respondents had some knowledge of drugs or knew someone who took drugs by the age of 14 years, whereas 37.1% had learnt it between the ages of 15-19 years. 68.6% of them reported friends to be their main source of knowledge, whereas 8.69% learnt about drugs from their

siblings (brothers) and 14.3% from the media and 5.7% from their co-workers.

53.4.% had used drugs for the first time between the ages of 15-19 years. 20% used it for the first time between the ages of 20-24 years, and 14.3% between the ages of 10-14 years. A few had used drugs as early as 10 years, mainly cannabis, and sizable numbers used it for the first time at the ages of 13, 14, and 15 years. Thus a total of 68.6% had used drugs by the age of 19 years. Only 11.4% had tried drugs for the first time after the age of 24 years and none after 34 years. Since 68.6% had tried drugs before the age of 19 years, it can be suggested that "the age of risk" for drug abuse begins in early teens. Only 11% had tried drugs for the first time after the age of 25 years and none were initiated into drugs after the age of 34 years. The normal age range during which a drug has some probability of being tried is between 10-25 years.

Methods of obtaining drugs

The majority of users of drugs (80%) had for the first time obtained drugs free from friends or acquaintances when they first used drugs. 71.4% of the respondents had used drugs for the first time in company of friends whereas only 14.3% had tried it alone, and 5.7% with their co-workers. Very few consumed drugs at the drug dens (addas).

The reasons for first use are given in Table XII (g). A glance at the table shows that "curiosity" was the reason given by a majority of the respondents (80%), followed by relief of stress (8.6%) "force of friends" (5.7%). Relief of physical pain (2.9%) and sociability (2.9%) were some of the other reasons given for initial drug use.

As many as 20% of the respondents stated that they had used drugs for the first time in school \ college, while 20.% in a hotel, 8.7% in hostels, parks, at drug dens (addas), 8.6% each at friends' residence and their homes and 2.9% in the place of work. 40% of the respondents were aware that drugs could be addictive but nevertheless tried them. The reasons given for this are as follows. 50.6% wanted to experience the effects of drugs, 27.2% were confident of not getting addicted, 9.1% wanted relief from pain. 80.6% were curious to experience the effects, whereas 7.4% wanted relief from mental tension.

The majority of users (77%) had for the first time obtained drugs free from friends, whereas 17.2% bought them from pedlars. 5.7% got them from either hospital nurses or health workers.

None the parents of the respondents were using drugs other than

alcohol and tobacco at the time of initiation, and 14.3% of the respondents reported that their brothers were consuming drugs at that time. 80% reported that their friends were using drugs when they were first initiated into drugs.

Regular use

40% of the respondents reported that they were between 15-19 years when they were regularly using drugs. 34.3% were between 20-24 years and 3.5% were between 10-14 years. 14.3% were between 25-29 years and 2.9% between 30-34 years.

The majority of users, i.e. 47% regularly made purchases from drug pedlars. Buying drugs was more common as the usual rather than the first way of getting drugs. In general, the users started getting it free from a friend or dealer and later shifted to buying the drugs. Some of the respondents (1.6%), obtained drugs from their own prescriptions in case of sedatives and stimulants. In a few cases (1.6%), forged prescriptions or thefts from others were the source of drugs. 9.8% obtained drugs from chemists, 3.3% from doctors and 3.3% from foreigners. Most of the respondents (31.9%), reported that they used drugs any time of the day, 12.8% almost the whole day, 17% took them in the mornings, 10.6% in the evenings and 8.5% after work.

85.7% had changed their drugs usually from a less potent to a more potent one. The reasons given are, "for a better kick", (22.8%), because their friends were consuming multiple drugs, or that their consumption depended on the availability of drugs.

Causes of drug abuse

11.7% reported that craving was responsible for drug use, whereas 14.4% gave friend's influence as the cause of their habit. 57.7% reported that they started using drugs because their friends were using them. Data was obtained about friends who were using the drugs when the respondents started to use it. 80%, of the respondents had friends using drugs when they began and they generally maintained or increased contact with such friends. 21.3% listened to music and 18% spent time with friends, 11.5% stayed alone when taking drugs. 8.6% had started abusing drugs after they gave up alcohol. Multiple reasons were given for regular use of drugs by the respondents. Continued use may produce additional reasons for use. Most of the respondents reported that they continued to use the drugs because they had become dependent on it. "To have a good time with friends" (17.8%), was the most common reason given for regular use, followed by "To get a kick" (17.2%)", "to get through the day" (11.1%), to reduce psychological stress (11.1%).

25.7% reported that their occupations were somehow responsible for them forming a habit, 14.7% reported that their families were responsible for their drug habit. For instance they pointed out that lack of parental control and conflict within the family were responsible for the habit, while 25.7% reported their health and 22.8% that their psychological or mental tensions were responsible for them to get addicted to drugs. 31.4% reported that the drugs did reduce their tensions, whereas 60% reported that it did not help to reduce tensions. By far the most common reasons appears to be the felt need to enjoy oneself or to feel good or "high".

17% reported that their economic condition was responsible for the formation of the habit. Some said that they had too much of money in hand (3.9%). Some gave economic hardship, unemployment, debt as being the cause of for their drug habit (4.4%).

45.9% reported that drugs did not help them in any way, influence of drugs and 8.1% felt that drugs increased their creativity.

Economic aspects of drug use

22.8% spent Rs. 500-1000 on drugs a month. 17.1% were spending more than Rs. 5000 a month, 8.6% spent between Rs. 2600-3000 a month and one spent as much as Rs. 600000 a month on drugs. 25.7% reported that they would definitely increase the quantity of drugs or change to other drugs if they had more money. The expenditure for drugs was met through different sources such as getting money from the family members and from friends (31%), from personal income (18.3%), stealing (12.7%), gambling (9.9%), peddling drugs (5.6%).

Problems attributed to drug use

As regards personal problems attributed to drug use, 74.3% of the respondents felt that drug use caused considerable harm to the individual, whereas 17.1% thought it caused severe harm and 8.6% that it was not harmful at all. 42.2% opined that drug abuse led to health problems, 26.9% to psychological problems, 13.5% to social and 15.4% to economic problems. 95.7% of the respondents reported one or more problems because of drug use. 15.6% reported problems with health and 18.8% problems with mental health, 10.3% with family relations, 27.2% financial and 11.3% occupation related problems.

Health was adversely affected in a large number of cases, (42.9%). The most commonly reported problems were collapsed veins (20.5%), abscesses (9.1%), fits (6.8%) etc. As regards mental health, 37.8% reported poor memory

and 37.8% poor concentration.

Relations with the members of their families, relatives, friends, neighbors and others showed more negative than positive impact (68.6%). Decreased communication was reported by 83.4%, fights by 12.2%. 26.8% had lost their friends because of their drug habit. 14.6% were shunned by their relatives, 31.7% did not report any social problems.

As far as the working capacity of the respondents was concerned, 62% reported problems at work, while another 36.2% reported increased absenteeism, 10.6% had lost their jobs because of their drug habit. 71.6% of the drug users reported that drug use had an adverse effect on their economic life. The adverse effects included, debts (20.7%), mortgaging property (15.1%), selling of property (13.2%).etc

Sexual problems reported include decreased libido (20.%), retarded ejaculation (2.9%) and impotence (2.9%). The drug users were asked whether their family members knew that they were on drugs. Out of the 35 respondents 74.3%, reported full knowledge of their family about their drug use, 25.7% thought their family suspected it.

Drug users tended to get involved in antisocial and criminal activities to support their habit. 11.5 % admitted to gambling, 14.8% to stealing, 21.2% had borrowed money, 4.9% had got involved in schemes of easy money and 6.6% had peddled drugs, 62.9% had been involved in fights because of drugs.

26.2% were arrested \charged \warned for a drug related crime. 32.8% were arrested or warned for possession of drugs and 29.5% had driven under intoxication. 82.9% felt that drug use was a bad habit, whereas 7.1% opined that it is either good or a very good habit. 10% did not have an opinion.

85.7% had told lies to hide their habit. 80% felt ashamed of their habit, 45.7% had taken an over dose of drugs and 20% attempted suicide because of their drug habit.

Effects of drugs

As regards psychological effects of drugs, 12% reported that after taking drugs their confidence increased, 24.2% reported a pleasant feeling, 13.6% a feeling of excitement, 10.6% hyperactivity, 10.6% visual hallucinations and 6.1% depression.

Physiological effects reported after drug use were excessive sleep (48.4%) and being very energetic (7.6%) 38.3% reported that after the effect of the drug had worn off, they took more drugs, 21.3% felt guilty and 19.1% resolved not to take it again. 11.1% reported irritation if they did not take drugs and 9.5% craving. 22 % could tolerate the withdrawal for a maximum period of only 3-4 hours, they counteracted the effects by taking more drugs.

Drug treatment history

35.7% of the respondents tried to give up drugs on their own and 28.6% reported that their mothers and spouses were responsible for motivating them to give up drugs.

62.9% had made some efforts to give up drugs prior to the interviews. 29.3% had tried on their own to stop taking drugs, 12.2% had attended detoxification camps, 7.3% had sought guidance from religious leaders and 7.3% tried avoiding friends who used drugs. 2.9% tried to get rid of their habit by using indigenous systems of medicine. Reasons for discontinuing use cited were, the effect of drug on health and dislike for the drug and its effects. Possible bad effect on health was by far the most common reasons for discontinuing use. Lack of availability or cost of the drug were also the frequently reported reasons for avoiding drugs. Religious or moral reasons for not using drugs were rarely mentioned. The most frequently stated reasons for not using drugs were practical and expedient ones, effects on health, did not like it, cause trouble with police, rather than expressions of moral conviction, or family or friends would not approve.

48.6% felt that it was very difficult to give up the drug habit, whereas 8.6% thought it was difficult, 5.7% a little difficult and 37% that it was very easy and they could kick the habit anytime they felt like it.

After treatment 31.4%, were able to stay off drugs for 1-15 days, 22.9% for 1-4 years, 20% for 1-4 months. Varied reasons were given for failure to keep off drugs. The reasons given were that it was difficult to cope with the withdrawal symptoms, (31.4%) lacked a strong will power, (25.7%) lacked support from the family, 11.4% because of craving and friends influence (5.7%).

The reasons given for remaining off drugs, even for a few days were, self understanding (8.9%), difficulty in getting the drugs (6.7%), bad experience with drugs, (8.9%), parental pressure (4.4%) because of treatment and change of city (4.4%). 11.4% reported that craving was too much for them to continue

in a drug free state. The difficulties faced in giving up drugs were that they had no control over craving (19.6%), withdrawal state (17.4%), agony and unhappiness (17.4%).

14.3% had last received some treatment less than a year previously. 25.7%, 1-5 years ago, 11.4% 6-10 years ago and 2.9% less than 3 months earlier.

12.5% felt that family support and self control would help them to give up the habit, 7.5% avoiding friends who take drugs, 7.5% getting involved in sports, 12.5% strong determination and 5% felt that counseling would help them to keep off drugs.

The respondents were asked to state the possibility of their still using drugs 2 years from now. A majority of 68.6% opined that they definitely would not use drugs in the future 17.1% were not sure and 14.3% stated that they would definitely use drugs in future.

40% were under treatment for drug abuse during data collection.

Needs assessment

The respondents were asked what treatment had helped them the most to give up the drug habit. 61.5% felt that the treatment that helped them the most was detoxification. 7.7% mentioned regular counselling and 7.7% rehabilitation.

65.7% felt that the families should be involved in the treatment process whereas, 28.6% felt that it was not necessary. 5.7% had no views regarding this issue. The reasons given for necessity of parental involvement were parental support, (31.4%) and guidance (22.8%).

28.6% of the respondents reported one or one or more areas in which they had problems and needed help. 45% of the users reported needing some treatment for drug abuse. The most commonly requested treatments were detoxification (59%), counselling including family counselling (25.7%). Only a minority of the drug users had received treatment in the past year mainly detoxification.

The other areas where they had problems and needed help included, finding a job,(18.2%), and to improve family relations (36.4%).

The respondents were asked to name the most valuable service that could be offered by the community to keep them off drugs. 17.1% expressed a need for athletic and recreational activities and 14.3% improvement of family

life. The respondents were asked what they would do to stay off drugs, if they could start their lives all over again. 31.7% said that they would just not touch drugs at all.

Opinions and suggestions

All the respondents felt that drug use had increased in Bangalore of late, mainly among students, (55.1%), slum dwellers (12.2%) and labourers (12.2%). 85.7% reported that drugs were easily available in Bangalore. Numerous places were mentioned where drugs could be bought easily. Shivajinagar, Jayanagar, Banaswadi, Kammanahalli, Koramangala, Frazer Town, Cox Town, etc. were frequently mentioned.

All the respondents felt that the problem of drug abuse could be combated by various methods. The most common way was by educating the youth (32%) and strict policing (17.9%).

When asked whether the use of drugs should be legalized, 25.7% felt that drugs should be legalized, mainly cannabis. When asked whether the possession of drugs should be controlled by law, 62.9% felt that possession of drugs should not be controlled by law. The reason given was that since the police force itself was involved in drug trafficking this would lead to further corruption. When asked whether the college officials on finding evidence of drug use on the campus should report it to legal authorities, 80% felt that the college authorities should report the matter to the legal authorities and further they should formulate a clear policy about drug use on the campus.

Methods for prevention of drug abuse suggested were drug education (77.1%) and educating the parents about problems of adolescents (71.4%), and strict law enforcement.

Trends:

The results of the study clearly show that drug users tend to be predominantly male, belong to younger age groups, and have lower levels of education, hail from upper social background, to be often unemployed and have more leisure time. Most did not participate in religious activities, and many spent too much of their leisure time meeting drug using friends.

The drug users further tended to have friends who used drugs, whom they met frequently to take drugs together. The most common meeting places seem to

be bars and pubs, college \school and at work.

Most drug users reported problems related to drug use such as health problems like collapsed veins, arguments with family and friends, problems at work, losing jobs, difficulties in concentration and absenteeism at work as a result of drug use. The most commonly expressed needs were for medical attention, help in finding a job and help in using their leisure time.

The majority of drug users reported a need for treatment. The most frequently mentioned treatments were medical and detoxification. Very few drug users had received treatment in the past year.

COMMUNITY SURVEYS

Community surveys were conducted to get information along the following parameters:

1. The drugs being consumed in different geographical and sociocultural regions.
2. The population (in terms of socio-demography) using each type of drug, in selected communities.
3. The number of people using each type of drug.
4. Frequency and quantity of use and mode of administration of drug.
5. High risk populations.
6. The geographical distribution of drug using groups
7. The problems associated with drug use.
8. The existence of conditions that induce/promote/inhibit drug abuse.
9. The historical, social and cultural factors related to drug use and abuse.
10. Belief and custom and its role in current life patterns of drug use.
11. The need for preventive/treatment/rehabilitative services.
12. The type of services available and needed.

A. Informed opinion survey (key informant technique)

An informed opinion survey was conducted to get information, views and perceptions of knowledgeable informants from the community who because of their occupational and social roles are in contact with drug hence are users and in a position to provide informed opinion about the problem.

This technique was chosen as the information relevant to the local community can be complemented by the opinions, knowledge and perceptions of persons who have been long term residents of the community or had knowledge about the cultural ethos and practices of that community because of their occupational roles. This technique helps to determine the extent and nature of drug use in the community, characteristics of drug users, problems and appropriate responses to such problems, psycho-social and cultural antecedents to drug use, etc.

Since the drug problem has multiple dimensions: legal, economic, social, psychological and since it affects various sections of populations like students, artistes, rag pickers, slum dwellers, labourers, professionals, etc, key informants engaged in various specialized fields of knowledge and

expertise from varied backgrounds and geographical areas (rural \ urban \ slums areas) were selected using the “snowballing” technique.

The categories of persons included:

1. Drug abuse prevention and treatment personnel (psychiatrists, counsellors, voluntary health workers, etc).
2. Health professionals: Doctors, and other health professionals.
3. Educationists: Principals of schools and colleges, teachers, wardens of hostels, school counsellors, students.
4. Social workers and personnel from welfare agencies, health educators.
5. Law enforcement personnel - Police, customs officials, drug controller, lawyers.
6. Media personnel - Journalists, TV and film actors and artistes.
7. Religious leaders.
8. Chemists.
9. Trade Union leaders.
10. Factory workers.

The number of persons in each category interviewed is given in Tables 12 and 13.(Tables in appendix 1).

They were identified by contacting colleges, social service agencies, local police, local hospitals, private practitioners, etc. These agencies and persons were asked to suggest other persons and agencies and the informants selected were able to provide still other names. Care was taken to select informants from different localities, including the rural area and the slums to get as varied and rich information as possible. The key informants were contacted by telephone or by letter and prior appointments were fixed.

An open ended interview schedule was developed in order to allow free expression of views. The interview schedule covered varied parameters to get ethnographic information.

It consisted of a core of common questions with additional questions related to individual fields of expertise and knowledge. It was content validated by experts and tested on a few informants and used in the field.

The interview schedule was translated into Kannada. Face to face interviews were conducted by trained investigators and core group members. The field investigators were trained in interview techniques and drug research and were sensitized to local community issues.

A number of practical problems were encountered by the investigators in the conduct of the survey. They had difficulty in meeting certain groups of people because of the nature of their work and hence had to be interviewed early in the morning, at lunch time or late in the evenings. Some informants in spite of prior appointment, were unable to give interviews because of their busy schedule and had to be contacted several times resulting in delay. These factors made considerable demands on the time of the investigators.

In the rural areas it was necessary for the investigators to spend sufficient time to become acquainted with the community and to be trusted by the people, before they could be interviewed. In the village the interviews were conducted early in the morning or in the fields at lunch time.

Since this technique has the disadvantage of relying on the views, and perceptions of the respondents whose reports may be distorted by faulty recall, lack of knowledge, bias, and a tendency to exaggerate, it was supported by a house to house community survey.

The results of the informed opinion survey are discussed separately for the rural and urban areas.

Rural area

In the Dommasandra village, 40 villagers were interviewed in order to elicit their views and opinions regarding different aspects of drug use\abuse. They were selected keeping in mind their intimate knowledge of the village and its residents. The socio-demographic details of the informed persons are in Table XII.

The informed persons from the rural area were asked to define a drug, 57.5%, defined a drug as a substance which causes intoxication (amalu, nasha), 10% considered drug as a substance which is bad for health, 5%, as a substance which makes one relaxed, 15%, as a medicine taken when one is sick and one person (2.5 %) as something which causes loss of memory. 7.5 % offered no opinion on this subject .

The colloquial terms used for drugs in Dommasandra, according to the informed persons are, Bhanga, Bhangi soppu, ganja, and Laxman patta.

It is interesting to note that the colloquial names of drugs have originated from the myths associated with them. For example, ganja is called Laxman Patta in Dommasandra, according to informed persons the reasons

being, that Lord Rama, during his exile to the forest was reported to be frequently in an irritable mood with his wife Sita, till Laxman started giving him cannabis, after which his disposition reportedly improved.

Asked what constitutes drug abuse \ misuse, a majority of the informed persons opined that, drug use becomes drug abuse, when it affects health (45%), work efficiency (32.5%), or if it is taken too much, and too frequently (10%).

According to the majority (55%) of informed persons, normal use is limited use, taken for a particular purpose, such as for religious insight, or on a festival, to celebrate. To most of them normal use referred to taking drugs once a fortnight (45%) once a week (40%) or once a month (15%). Heavy use is taking it frequently, i.e, daily or more than 2- 3 times a week.

When asked, whether drug abuse was a personal, social, legal or an economic problem, 17.5% of the informed persons opined that it was a personal problem, mainly health, 12.5% as an economic problem and 10% as a social problem.

Interestingly only one informed person considered drug abuse to be a legal problem. 32.5% considered it not a problem at all.

When asked what should be the determining factor to consider whether an individual was misusing drugs, 60% opined that frequency of drug use should be the determining factor, whereas, 30% considered the quantity and the type, 10% the type, frequency and the quantity of the drug should be taken into consideration while determining misuse or abuse.

Majority of the informed persons regarded drug use as not a problem at all and only 3\40 (those involved in health professions) considered them as ill persons.

A majority of the informants felt that it was alright for the elderly persons to take drugs, as they had worked hard all their lives and had shouldered responsibilities. It was also acceptable for sadhus and swamijis, or other religious persons who take it for religious insight or to aid them in meditation, or for persons who engage in strenuous physical labour to relax. It was also acceptable to take drugs on festivals to celebrate.

When asked to describe unacceptable behaviour after drug use, according to a majority (57.5%) of informed persons, unacceptable behaviour is not looking after the family responsibilities, not working (30%), beating wife

and children (7.5%), "bad behaviour" and fighting, (2.5%).

A majority of the respondents from the village felt that the consumption of drugs had increased in the village (Dommasandra) and neighbouring villages such as Chandrapura, Rajapura, Hosur etc. Drug use was restricted to single drugs mainly cannabis (ganja). Most of the informed persons were unaware of other drugs besides ganja and opium. A majority of 55% of the informed persons felt that drug use had increased in Dommasandra, whereas 32.5% felt that it was the same and 12.5% that it had reduced because of better education. A few of the informed persons revealed that drug use had spread to the younger age group. A small number of young boys between the ages of 10-14 year olds were found to be abusing cannabis, from curiosity and companionship with drug users. There is a rigid custom in the village of not allowing youngsters to use drugs and since it is socially unacceptable for the youngsters to use ganja, they do it on the sly. As regards the community, they revealed that the consumption has increased in the Devanga and Togatu communities whereas earlier it was more common amongst the Brahmins. The drug users of the scheduled caste communities, do not smoke with the brahmins who do it mostly in the temple. Though the temple is not out of bounds for the harijans, they do not easily mix with the persons of the higher castes. As regards the occupation, it was more among the weavers and farmers. Drug use was uncommon among the women. Except on occasions such as Rama Navami and Shivarathri, women do not consume drugs. On these festival days, even children use it as it is made in the form of "Ramrasa", which is offered to God. It was not acceptable for the women to consume ganja.

A majority of the informed persons had some experience with persons dependent on drugs, they had seen on an average 5-6 persons dependent on cannabis, all male, from all socio-economic backgrounds, but mainly from lower and middle class families and all belonging to hindu religion. The regular users of cannabis in the rural area were between 35 years to 75 years. The age when cannabis was first used ranged from 25 -50 years. Most smoked it with a special pipe made of clay and mixed it with tobacco. They smoked about 5-10 gms a week which cost on an average 5-6 rupees, which is usually shared by 6-10 persons. Hence a person takes on an average less than 5 gms. It is taken about once a week, though a few, less than 20 take it every day. Alcohol use according to them was the main curse of the village with many abusing alcohol and it is considered as a problem, whereas drug use is not perceived as such. Ganja is usually smoked in a group, of 8-10, who gather together on a particular day, mainly on Sundays, or on holidays, at the temple, or in the fields, to smoke cannabis.

Most of the informed persons were not aware of other drugs besides ganja and opium. They revealed that a few elderly men in the village were consuming opium and that it was also given to children below 6 months of age to help them sleep.

The informed persons revealed that ganja is sold by three persons in the village, an elderly lady in her house, one person close to the temple and another belonging to the scheduled caste. It is sold in petty shops. Though a little ganja is grown in the village, it is mainly brought from Hosur by bus.

Drug use was not viewed as a problem by the informed persons, except in extreme situations as when it constituted a health hazard or caused work inefficiency. Integrated drug use is perceived as improving the quality of life and work efficiency. They also reported that cannabis use helps one to concentrate on God and reduces negative emotions like jealousy and anger. Drugs are used openly by the villagers, there is no fear associated with its use and many are not aware that it is illegal to use drug. Since ganja costs very little and since it causes little social problems, the villagers do not consider it a problem.

With reference to the parental background, the informed persons could not pinpoint any particular family pathology, though they felt that some persons start using it as part of the family tradition. As regards the reasons for drug use, most of the informed persons opined that the main reasons were for religious purposes, to sharpen religious insight, or as part of the social custom, mainly during marriages, festivals and funerals and to facilitate relaxation. Only 2 respondents felt that it is taken to reduce anxiety or depression.

The most frequently voiced opinion as regards the sources of information about drug use, were swamiji, friends and family members. It is interesting to note that none of the informants felt that a drug pusher was responsible for introducing the use of ganja in the village.

The villagers also narrated that there is a woman in the village who gives her husband opium mixed with milk to put him to sleep so that she could meet her paramour at nights. Opium is given to children to lull them to sleep so that the mothers can go to work. It is mixed with milk and given to infants who are below 6 months old. The custom is dying these days.

As regards how one can make out if a person has used drugs, they reported that a person becomes very drowsy or calm or talks too much or becomes philosophical. A person stops using drugs if the family disapproves of it or if it is not available.

By all indications, there is a strong social stigma attached to too much drug consumption, which is contrary to the norms of the village. The slang term for a person addicted to cannabis is "bhangi". The prefix "bhangi" is added to the name of the abuser. The most frequently cited reasons for the disapproval are health, cost, violation of religious precepts. The respondents from the rural areas affirmed strongly that they did not want their children to use cannabis because they have now realized that it can have a number of ill effects. They expressed that education can help the youngsters to stop believing in superstitions.

As regards treatment, they felt that specialized treatment is unnecessary as cannabis dependence is not an illness. As it is a habit, the person could be encouraged to give it up and such persons do not need any treatment medical or otherwise. They also reported that religious belief can however help them to keep their resolve.

According to the informed persons, the practice of smoking cannabis began about 100 years ago, when a holy man, named Parappaswamy, settled down in Dommasandra village. He hailed from Boodole, in Kolar district. He was a devotee of Veerabadrashwamy, a Shivite. He introduced the practice of smoking cannabis to the local residents, in order to increase religious insight. A mutt (temple) was built in his honour after his death, where a statue of Parappaswamy was installed. He is shown smoking cannabis. The swamy died in the year 1905. The devotees before inhaling the smoke, chant his name. They sit in the temple premises and smoke. People from about 10-15 villages get together, at 6.30 PM, on Sunday evenings. Since a few months, the proprietorship of the temple is under litigation. A teacher from the city has taken over the mutt. She does not allow the villagers to smoke in the mutt, hence they sit in the fields and smoke. They gather together for about an hour and take about 3-4 puffs per person. One person finances it per session. Most of the smokers are above the age of 40 years. The total population of smokers frequenting the temple is about 20-30.

Urban Area

The informed persons from the urban area belonged to different fields of expertise. Table XIII gives the area of specialization, the age and sex of the informed persons. The informed persons had an average age of 47.2 years and 70% of them were male.

The informed persons belonging to different fields of expertise, were asked to define a drug. 70% of the psychiatrists 20% of the teachers, 33.2% of the



counsellors, 64.2% of the social workers, 66% of the chemists, 55.6% of the religious leaders and 55.6% of the students defined a drug as a chemical substance taken without medical prescription. To 57.2% of the law enforcement personnel it is an illegal substance which affects the body.

A wide difference of opinion was observed as to what constitutes drug abuse \ misuse. To the psychiatrists, drug abuse implies using drugs for non medical purposes. To the police officers and chemists, it is an illegal use of drugs, to the social workers it implies, harm to the body. A majority of informed persons from different fields of expertise, did not have an opinion on this matter. For most psychiatrists, normal use is use of drugs only for medical purpose. For 33.3% of the psychiatrists, there is nothing called normal drug use, all use of drugs for non medical purposes is abuse. For 41.7% of the counsellors and 33.3% of the general practioners, drug abuse is "when drug use leads to other problems".

For a few informed persons normal use represented controlled use of drugs which does not lead to any other problems, though they were not able to specify the amount or the frequency of drug intake which could be considered normal. A few informed persons, mainly artistes opined that taking cannabis occasionally could be considered normal. In a general sense, most informed persons agreed that drug abuse is continued use of drugs despite the occurrence of problems associated with its use, such as health, legal, social and economic. Abuse occurs when the users functioning is deleteriously affected in one or more respects. The informed persons from different professions tended to emphasize the consequence of drug use in their own field of expertise for example, the police officers tended to emphasize the legal angle, whereas the social workers the social angle, the psychiatrists and health professionals the physical and psychological aspects.

As regards the deciding factor to distinguish use from abuse different opinions were expressed by informed persons. To majority of the informed persons from all fields of expertise, the important factors to be taken into consideration to determine whether an individual was abusing drugs, should be the type of drug, besides the frequency and quantity that is consumed. Some informed persons opined that effect of the drug should be taken into consideration, whereas others felt that it is important to consider the quantity or the frequency of the drug taken.

A majority of the informants from different backgrounds considered drug addiction as an illness and an addict an ill person. Only 22.2% of the

students considered them as immoral persons and only a small percentage of police officers considered them as criminals.

Almost all informed persons opined that it is not right for anybody to take drugs without a medical indication, whether they are artistes, filmstars, or involved in creative professions. A small minority of the informed persons belonging to the creative professions on the contrary, felt that occasional smoking of cannabis is alright, especially as it increases creativity.

As regards the behaviour that is considered to be unacceptable after drug use, most of the informed persons were of the opinion that most drug use led to disruption of the personality and environment. Socially disruptive behaviour and low moral standards, were considered as unacceptable by most informed persons. A majority of the psychiatrists and police officers opined that all drug related behaviour, including taking the drug itself was unacceptable.

Spread of drug use : The informed persons were asked their opinion as to whether drug abuse had increased, decreased or remained the same in Bangalore, over the last 5 years. The majority of the informed persons opined that drug use had definitely increased in Bangalore in the last 5 years. Only 52.9% of the police officers, 45% of the psychiatrists, 33.3% teachers and 25% of the counsellors felt that drug use has decreased. It is significant that a high percentage of police officers consider that drug abuse had decreased in Bangalore and some expressed that it is definitely not a problem in Bangalore like it is in other metropolitan cities like Bombay, Delhi, Madras and Calcutta. The general view of most of the informed persons was that the problem of drug abuse had increased at a rapid pace in recent years only because of the easy availability of drugs, coupled with lack of legal control and changes in social and cultural areas.

When the respondents were asked in which areas in Bangalore the problem had increased, almost all areas in Bangalore were mentioned. But the areas considered to have a real problem were Shivajinagar, Ulsoor, Fraser Town, Cox Town, City Market, Banaswadi, Kamanahalli, Koramangala and Jayanagar.

There was an unanimous opinion amongst the informed persons that drug abuse is a problem of the youth and has increased in the age group of 15-25 in the last 5 years. Numerous reasons were given to explain this, most common being - easy availability, experimentation, curiosity, peer pressure, disintegration of families, frustration etc.

As regards the community in which drug use had increased, a majority of the informed persons felt that it had increased in all communities and religious groups, but more among the Christians, especially in the Anglo-Indian community. As regards the occupational groups, the students headed the list. Other occupational groups mentioned were, rag pickers, factory workers, labourers, musicians, actors, and artistes. A few mentioned professional categories like doctors and nurses to be also abusing drugs.

Experiences with drug addicts

As regards their experiences with the addicts, a majority of the informed persons, opined that the addicts belonged mostly to the age groups of 18-35 years, mainly male, coming from all socio-economic backgrounds, but mainly belonging to the upper economic group, or lower economic class residing in slums and the student community. The occupational categories to which they belong are said to be mostly students and unskilled labourers, the unemployed, ragpickers and to professional categories like doctors, nurses, artistes etc.

Most informed persons felt that consumption of drugs had increased among women, whereas 25% of the psychiatrists and 28.6% of the police officers felt that the increase was negligible. The reasons given for the increase ranged from fashion, women's liberation, more freedom, and peer pressure.

As regards the parental background, majority of the informed persons, opined that the addicts they had seen, had come from broken homes, homes where there was parental abuse of children or families with alcoholics.

Varied reasons were suggested by the informed persons as to why a person abuses drugs. Peer influence, drug pedlars' influence, curiosity, experimentation, underlying psychopathology and psychological reasons such as failure or disappointment in life, emotional disturbance, frustrations, lack of self confidence etc. were suggested. The easy availability, has been mentioned by a large percentage of informed persons from all backgrounds.

As regards the sources of information about drugs, friends headed the list, followed by co-workers, media and relatives. Friends again were rated first as being the main source of drugs, by all the groups of informed persons, followed by drug pedlars and pharmacists.

Most informed persons were of the opinion that multiple drugs were being abused, most commonly, cannabis, heroin and Tidegesic.

A large number of informed persons did mention that ganja is the first drug tried by anyone graduating to potentially more stronger\harder drugs such as heroin (brown sugar), mandrax, pethedine, morphine and tidegesic. Some informed persons also mentioned that addicts use any thing that gives them a kick, such as snake bites, glue and petrol.

The quantity of drugs varied but the abusers tended to take as much as four times the amount of drugs taken initially. Similarly, the frequency, tended to increase as much as four times than initially, depending on the type and quality of drug taken..

As regards the source of drug supply, the majority of informed persons, named friends, drug pedlars, chemists, panshops, forged prescriptions etc. The source of expenditure for drugs came from borrowing money from family and friends, stealing money gambling, schemes of easy money, etc.

Different methods of consuming drugs were mentioned for different drugs. The most common method being, smoking, injecting, chasing, inhaling, swallowing, taking it with beetle leaves and alcohol.

The drugs are usually consumed in company of friends, at social functions, in parks, isolated places, friends' residence, at a party, in a parked car or at home and parks. But they are also taken, when the addict is alone by himself.

Drug addicts take drugs daily but according to some informed persons, on certain occasions like during music concerts, weddings and festivals like Holi, drugs are consumed, by others too, which is socially accepted.

When the stock of a particular drug is exhausted or not available, many drug abusers tend to substitute another drug, mainly alcohol. To boost the effect of a drug many addicts combine different drugs, inject drugs, and or use inhalants or snake bites.

According to the informed persons a person who has used drugs can be identified from the way he looks, behaves, talks, walks etc. Addicts usually are dressed in dirty clothes and have poor personal hygiene.

The informed persons were asked whether the effects of drugs vary for different groups of persons, like male and female, young and old. Most of them opined that it depends on whether a drug user is a novice or not. The effect on women according to some informed person is more intense than on men. Generally the informed persons opined that the effects depend on the drug

taken and not on age or sex.

As regards the consequences of drug use, the informed persons mentioned all areas of life as being affected, which included health, emotional well being, family relations, besides creating social and occupational and legal problems for the addict and his family.

The common problems experienced by the drug addicts other than addiction were poverty, marginalization, stigmatization, harassment from police and disruption of family.

As to what would make an addict stop using drugs, the majority of the informed persons opined that disapproval from the family, non availability of drugs, drugs being too expensive and the effect drugs had on health etc. as being the main reasons why an addict would stop using drugs.

The informed persons were asked to give their suggestions as to the prevention of drug abuse in our society. The majority of the informed persons opined that prevention should be a combined effort of the government, private organizations, voluntary organizations and religious persons.

The strategies suggested for prevention of drug abuse, ranged from education, strict enforcement of laws, decreasing the availability of drugs, implementation of cultural values, to parental education.

As regards treatment, a majority of informed persons opined that the treatment should be by a psychiatrist, where detoxification was concerned. It is interesting to note that persons from different fields of expertise, stressed the importance of their professions in the treatment of drug abuse. Whereas the psychiatrists and general practitioners, stressed detoxification, the social workers emphasized community based treatment and the religious leaders religious therapy. As regards rehabilitation, most of the informed persons were of the opinion that the drug addicts should be rehabilitated in the community and that they could get married and be trusted with money and responsibilities.

As regards services available in Bangalore, most informed persons were aware that drug addicts can avail of medical treatment for detoxification in many hospitals and private nursing homes and drug addiction treatment centres. Except for psychiatrists, social workers and counselors, only a few could name centres involved in demand reduction programmes and were not aware of the nature of the services provided by such agencies.

Socio-cultural aspects of drug use

The informed persons were asked their opinions regarding different socio-cultural aspects of drug use in India. Most of the informed persons opined that drugs were traditionally used in India, mostly for religious and recreational reasons. The drugs that were used traditionally being cannabis and opium, mainly during festivals like Holi, Rama Navami etc. and marriages. Many communities were named by the informed persons who use drugs on certain occasions for either religious or recreational reasons, they being Rajasthani, Jains, Kshatriyas and Harijans and some tribes etc. The reasons for using drugs traditionally ranged from religious, recreational, medicinal, to reduce inhibitions, to facilitate social interaction and to reduce the effect of bereavement etc.

As regards references to drugs in traditional writings, many of the informed persons, named religious texts, the Vedas, folk stories, mythological stories etc.

Though there was religious sanction for the use of cannabis products in India, many of the informed persons, attributed the increase in drug use in recent years to westernization, erosion of cultural values, breakdown of families, increased stress, fads, fashion, breakdown of the family, poor role models etc.

The protective factors that inhibit some groups of people like women, from taking drugs according to the informed persons are, family and socio-cultural sanctions which forbid women to use drugs, a sense of responsibility and better coping skills.

As regards the traditional methods employed to treat drug abuse, many methods were named. These were mainly social controls, religious methods, like sending the addicts on religious pilgrimages, swearing on God, taking vows, meditation, massages, charms, and therapeutic communities.

Besides the general questions on drug use, specific questions were put to some categories of professionals like psychiatrists, teachers, police officers and counsellors related to their field of specialization.

Psychiatrists

The psychiatrist interviewed had on an average 10.3 years of experience. They reported that on an average they treat 10-15 addicts per year, mainly male. The

most abused drugs were cannabis, benzodiazepines, Tedigisic and brown sugar. The reasons given for cannabis abuse is that it is cheap, has less withdrawal and that it is easily available. The solvent inhalant abused in Bangalore are petrol, glue, turpentine, fevicol and kerosene.

The drug addicts are brought by parents, or referred by other general practitioners, or by social workers. Very often they are brought by ex-addicts or their friends for treatment.

The psychiatrists, generally take on the addicts for treatment if the addicts are motivated and have good family support. The patients are motivated by counseling them about the ill effects of drugs.

The treatment followed by psychiatrists, interviewed is similar. They usually detoxify the addict, followed by counselling, psychotherapy and group therapy. Aversion therapy is also done. Some are treated with antagonists like Nalaxone. 90% of the psychiatrists had some admission facility. Almost all of them admitted the patients for detoxification. 77.8% of the psychiatrists permitted the parents to be with the patients. According to the majority of the psychiatrists, addicts, come for help only when they are pushed by their parents, or if drugs are not available, or when they are motivated by religious persons or ex-addicts.

According to the psychiatrists, the addicts when they come to them for treatment are generally in very poor health, with strong craving, have difficulty relating to people, have poor work efficiency and their moral and social behaviour is usually affected.

The factors that interfere in treatment are poor motivation, family non involvement, poor social support, continued peer pressure and the cost of treatment.

The psychiatrists put their success rate as generally poor, 28.6% of the psychiatrists put their success rate at 20-40%, 19% at 40-60%, and 4.8% at 10-20%. The common reasons for relapse are craving, poor social support, poor coping skills, peer pressure, returning to the same environment, lack of motivation, underlying psychopathology and lack of long term rehabilitation services.

The ways of preventing relapse mentioned by the psychiatrist were, changing the place of stay, strict policing, making drugs difficult to get, change in cultural values, long term follow up, rehabilitation and after care services.

The role of parents in the early detection, treatment and rehabilitation of the drug addict has been unanimously stressed by the psychiatrists.

The treatment services for alcohol and drug treatment according to the psychiatrists should be similar, as a poor country like India, can ill afford the luxury of separate programmes.

The methods for preventing drug abuse suggested are, conducting awareness programmes in schools and colleges, educating the youth about the dangers of drug use, conducting programmes for teachers and parents about problems of youth, and an emphasis on cultural values and by enforcing anti-drug laws strictly.

Principals and teachers

Out of 15 principals and teachers only 5 admitted that they had a problem with drugs in their schools and colleges. Most of the principals and teachers denied that there was any drug use in their colleges, but named other colleges where it was more prevalent. Only 8 teachers knew of students who abused drugs.

According to them it was a common phenomenon in Bangalore for students to take drugs during rock festivals, parties and picnics. Only one teacher admitted knowing a student who peddled drugs. 75% of the principals interviewed said that they would definitely expel students who peddle drugs, whereas they would be more sympathetic towards the student who uses drugs. The drug users according to the teachers, mainly come from broken families, or affluent families with too much money and with little parental attention.

According to the teachers, most of the schools and colleges had no student counsellor. The most common stresses according to the teachers which make the student prone to drug abuse are, pressure from parents to perform better, high expectations from parents and teachers, too much emphasis put on academics and very little on extracurricular activities, bulky syllabi, competition, frustration, fear of examination, media influence, and peer pressure.

As regards the preventive measures taken by the schools and colleges to reduce drug abuse are, value education, awareness campaigns, appointing school counsellors, greater vigilance, having close interactions with students etc. The role teachers and principals can play in prevention of drug abuse, according to them are reducing the communication gap, making students

aware of the dangers of drug use, having close interaction with students, instilling strong values in them and early identification of the problem.

Police Officers

A majority of senior police officers interviewed reported that drug abuse is not a priority for them, whereas maintaining law and order was. They also reported that drug abuse is not much of a problem in Bangalore, like other big cities in India. Drug abuse had decreased in Bangalore and drugs are difficult to obtain, because of strict enforcement of the NDPS Act.

As regards problems faced by the police in enforcement of the NDPS ACT, most police officers, opined that the police force is not sufficiently equipped to deal with the problem due to paucity of trained staff and vehicles to nab the culprits. Further no complaints are filed. Unlike other crimes, the drug addict is the victim himself and as a result no pressure is put on the police to pursue cases.

Further, the cases are not booked properly, the head constables are not aware of the NDPS Act as most are educated only upto SSLC or PUC and are ignorant of the exact procedures to follow. Moreover it was difficult to get witnesses because of the fear of reprisal from drug pushers. Drug pushers further had political connections. The legal procedure is complex and long. The accused are let off on small technical grounds. Though the offence is nonbailable, most of the accused are granted bail. The police officers revealed that the general public is often reluctant to register complaints either out of fear or social stigma. The police are also under political pressure not to pursue cases. Without a proper infrastructure to back up the enforcement personnel, it is often difficult to nab the traffickers who have sophisticated arms. The police are not trained and hence are unable to identify drugs. If a person is caught in possession of drugs, witnesses are necessary to prove it. Often witnesses are bought by the pedlars, or are reluctant to testify out of fear of reprisals.

When they were asked whether the corruption in the police force is in any way responsible for compounding the problem in Bangalore, by aiding and abetting the sale of drugs and taking bribes, from pushers, the police officers reported that there are blacksheep every where, but emphasized, that if corruption was present in the police force, it was not at the top, but at the lower rungs. Sometimes the information is leaked to the drug traffickers, before they can be raided.

Cases against the accused are not booked properly, very often these

cases are not settled on time and the accused are let off on bail as judges tend to give the benefit of doubt to the addicts, if the proof is insufficient. The police officials accepted that even raids are rendered futile due to the prior leakage of information mainly through the lower cadres. When the senior police officers were asked about the details of the NDPS Act, most of them were ignorant including the very senior police officers.

Counsellors

The counsellors involved in demand reduction programmes were interviewed. The most commonly abused drugs in Bangalore according to them, were brown sugar, cannabis, and tidegesic.

The criteria for taking on an addict for treatment depended mainly on the addicts motivation and willingness to comply with rules.

The methods used for motivating an addict to remain in treatment included empathic listening, educating the addicts about dangers of addiction, building self esteem etc.

Most addicts were brought by parents, or referred by other professionals for counseling. Recovering addicts were also mentioned as sources of referrals.

Varied methods were used for treating the addicts by counsellors. They included, behaviour therapy, supportive therapy, group therapy, cognitive techniques, confrontational techniques, meditation and yoga. Addicts were also encouraged to take part in narcotics anonymous.

The persons most at risk for drug addiction, according to the counsellors, were those who came from broken families, who were unemployed, or had addicts in the family. The addicts generally seek treatment when they are pushed by their parents or have no money to support their habit.

The factors that interfere in treatment according to the counsellors are craving or lack of motivation. The reasons for relapse are peer pressure, lack of family support, easy availability of drugs and poor coping skills. The methods used to prevent relapse suggested by them included the involvement of the family, regular followup, successful rehabilitation, and involvement in narcotic anonymous groups.

According to the counsellors, the family involvement is necessary from identification of the problem till rehabilitation.

The methods suggested to prevent drug abuse are, awareness

programmes, education concerning living skills, and strict enforcement of laws.

Trends: Differential concepts of use and abuse depend on the socio-cultural and religious beliefs. Drug use in rural area is integrated into the sociocultural and religious life of the person and hence viewed as normal, whereas it is considered as a deviant activity in the urban area. Drug use in the village is contained by “inbuilt” controls, which specify the amount and occasions of drug use and hence there are no serious social, economic and occupational problems associated with its use. In the urban area, multiple drugs are used with associated problems. Hence drug use and abuse can be defined only in the context of sociocultural and religious background of the user.

From the impressionistic information of the informed persons, it can be concluded that drug abuse is steadily increasing in Bangalore, amongst the younger age groups, mainly in students and unemployed and the slum dwellers. Multiple drugs are being abused in Bangalore, the main reasons for drug use being curiosity, peer pressure and easy availability of drugs in Bangalore. The Cantonment area is more drug prone than other areas. The sources of drugs are mainly friends, pedlars and pharmacists. The treatment facilities do not meet the treatment needs of addicts. There is hardly any emphasis on rehabilitation and after care services. Preventive measures should include awareness programmes in schools and colleges, peer group training and strict enforcement of drug laws.

B. Household Surveys:

Aim:

1. To examine whether there are significant differences in the prevalence of drug abuse in 3 different geographical regions and to explore the nature of any such differences.
2. To get a data base for the areas selected.

A cross cultural approach was adopted to determine and interpret the epidemiological characteristics of the selected drug using communities and to identify the rationale behind drug use incidence. The basic questions that are addressed in the household surveys with respect to culture and drugs are:

- 1) Do different communities or social groups show characteristic patterns of drug use?
- 2) What are the problem patterns of use in these areas?
- 3) How many individuals are involved?
- 4) How extensive is this abuse?
- 5) Is the behaviour considered socially acceptable or deviant?
- 6) The existence of conditions that induce \promote\inhibit drug use.
- 7) What is the social response to this problem?

Surveys in different geographical and cultural regions help in getting knowledge about the etiological nature of the drug problem. The issues that have been investigated in the community survey are the type of persons who are using drugs (the profile of the drug user) and other data besides residential and demographic data, economic implications of use, social ties and interactions, family background and relationships, as well as descriptions of living routines and lifestyle, religious and leisure time activities, causes of drug use, effects of drug use, drug problem, drug treatment history, and needs assessment.

Three distinct cultural regions were selected i.e. rural area, urban slum and an urban area. The characteristics of each area are distinct from one another in terms of social and economic organisations. The survey aims to elucidate the urban, rural and slum patterns of drug use.

Dommasandra, a village 23 kilometres from Bangalore, was selected to represent the rural area. The village consists of 1360 households. The total population of the village is 6680. The majority of the villagers are agriculturists and weavers. The villagers belong mainly to these castes - Brahmins, Devanga i.e. weavers, and Schedule Caste i.e. Togatu.

The urban slum (Shantinagar slum) selected is 4 kilometres from St John's Medical College. The total population of the slum is 940. The slum is divided into 4 wards. Most of the slum dwellers are migrants from rural areas, mainly from the neighbouring states. The majority of the slum dwellers are manual labourers or engaged in semi-skilled jobs. Their jobs are not regular and the household is maintained on the basis of daily earnings. The housing arrangements are single units with overcrowded space. Large families live in cramped quarters with no sanitary facilities and even essential furniture. Some of the dwellings are makeshift. The urban area Frazer Town was selected because the data from the police, Narcotic Control Bureau and case studies indicated that there was a very high concentration of drug users and pedlars. Most of the population belonged to the minority communities i.e. Muslims and Christians. The rural area Dommasandra and the urban slum Shanthinagar were selected as St. John's Medical College has a Primary Health Centre there. The rural area Dommansandra was selected as it was known that traditional patterns of drug use was prevalent in this area.

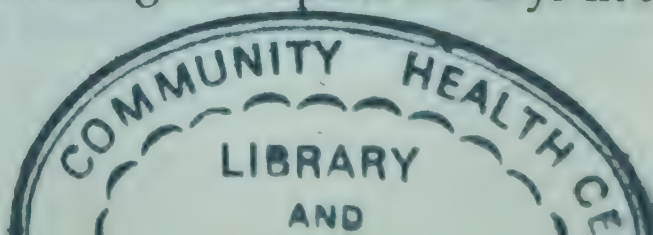
The technique of Random Systematic Sampling was used to select the population of the study. The initial household was selected at random. Thereafter every 3rd house was selected. In case the house was found locked, two more attempts were made, after which the 4th house (the house to the left was selected). The household was defined as a family unit following the criteria of common food supply (WHO 1981). This was done as in the village, one house led into another and most houses were not numbered. Moreover more than one family lived in a single house, especially in the slum.

All members of the family above the age of 10 years were interviewed, as the analysis of the case histories of drug users, showed that a sizable number of them were already initiated to drug use by 10 years. The advantage of this method, is that it is easy and the sample is spread over the whole geographical area selected.

Method:

Members of the household over the age of 10 years, were interviewed in the local language, (Kannada), or their mother tongue, using a semi-structured interview schedule. The respondents were assured of the confidentiality of the information given. The head of the household was interviewed first, thereafter the other family members. Women were not interviewed alone, if so desired by them.

Before the survey was started, the investigators spent 2-3 days in the



slum and village getting acquainted with the local customs, way of life and the geography of the areas. They were introduced to the local community leaders, staff of the Primary Health Centre, health educators and social workers in the rural and urban slums, and their co-operation solicited.

Identical method of data collection was followed in all the three areas. In all the three areas, it was necessary for the investigators to start work by 7.30 in the mornings as most of the people had to go to work. In the village and slum most of the labourers left home early, hence the interviews could be done only in the evenings or on holidays. Most of the adult males were usually drunk in the evenings, this added further to the problem of data collection. During the day, the slum was almost deserted except for the very old, and a few women and children.

After initial rapport was established, the respondents from the village were very co-operative and forthcoming with the necessary information. The respondents from the urban area were on the other hand, suspicious and on guard. Most were unwilling to be interviewed. Some were under the impression that the investigators worked for the government, especially from the income tax office. They were unwilling to answer most of the personal questions, especially related to their income, alcohol and drug consumption. Some of the women were reluctant to be interviewed. They were even unwilling to let their children be interviewed. Most often, the interviews were interrupted and the investigators made to wait long hours. Some people even refused to open their doors, and some interviews were conducted on the doorstep. Hence only 183 interviews could be completed.

In the slum, as the Primary Health Centre staff accompanied the investigators for the initial visits, the slum dwellers were more open to the investigators. A total of 963, villagers, 254 slum dwellers and 183 persons from the city were interviewed.

Results:

Table 14 (see appendix 1) shows the socio-demographic and other characteristics of the total sample. The mean age of the rural sample was 42.8 years and for the slum and the urban area was 44 and 45.8 years respectively. As regards religion, a majority of the rural and the slum sample was predominantly Hindu (95.8% and 87% respectively), whereas the urban population belonged to the minority communities (37.7% Muslim and 30.05% Christian). The level of education in both the slum and the village was low with 46.06% of the slum and 44.86% of the village being illiterate. In the urban area

on the contrary, only 9.84% of the sample was illiterate. A higher percentage of the slum population was unemployed (13%) compared to the city (6.58%) and the village (1.87%). A majority of slum dwellers (40.55%), were employed as unskilled labourers, whereas in the village the main occupation was farming (16.72%) and in the city 14.75% held skilled jobs.

Whereas a large percentage of villagers owned their homes (70.40%), only 40.91% of the slum dwellers and 53% of the urban sample lived in their own homes. In marked contrast to the 72.48% of the rural and 37.16% of the urban samples, only 15.75% of the slum dwellers had lived in their area since birth. Most of the slum dwellers were migrant labourers from the rural areas.

Whereas a majority of the slum (86.86%) and rural (94.54%) had attended government schools with Kannada as the medium of instruction, (94.73% and 70.80% respectively), only 14.56% of the city dwellers had attended government schools. 44.85% of the city dwellers had attended English medium schools.

The size of the families in the village and the slum were larger than the urban families. 58.26% of the rural families were joint, whereas 31.89% of the slum and 22.4% of the urban population lived in joint families. 4.78% of the rural, 17.72% of the slum and 12.02% of the urban sample had not participated in any religious activity in the past 12 months.

Where as 69.95% of the urban population had some kind of hobby or leisure time activity, 49.42% of the rural, and only 18.11% of the slum population reported leisure time activities.

Since a large number of urban dwellers refused to give their incomes, this category has been omitted from the analysis.

Drug History

In all the three samples drugs "ever used" was reported by a small percentage of the total samples, 4.36%, 7.09% and 4.37% in the rural, slum and urban areas respectively.

The most commonly used drug in the rural area was cannabis (3.15%). Only 0.62% of the villagers had ever used opium. In the slum, 3.15% of the total sample had used cannabis, 1.57% inhalants, 0.79% barbiturates and 0.79% heroin. In the urban area, a very small percentage of 2.73% had ever used cannabis, 1.09% tranquilizers, and 1.55% heroin. In the past 12 months, only 3.84% of the villagers, 3.94% of the slum dwellers, and 2.19% of the urban population had used drugs. Of these 3.53% of the villagers had used cannabis,

and 0.31%, had used opium. In the slum, 1.97% had used cannabis, 0.78 % inhalants, and 0.39% barbiturates (methaqualone) and 0.39% opium. In the urban population, only 1.09% had used cannabis, 0.55% tranquilizers and 0.55% heroin in the last 12 months. There had been no use of amphetamines and cocaine in the last 12 months. In the last one month, before the interview, 3.32% of the villagers, 3.54% of the slum and 2.19% of the urban population had used drugs.

The most commonly used drug in all the three groups was cannabis. The use of inhalants was present only in the slum. All the drug users in both the rural and the slum were males. Only 25% (1\4) of the urban sample was female. The average age of current drug users in the rural area was 44.5 years, while in the slums and the urban areas they were much younger, i.e. 20.5 and 22.5 years respectively.

The majority of 81.25% of the drug users in the rural area were married, whereas only 22.22% of the slum and 25% of the urban drug users were married.

As regards religion, the drug users from the rural area, were exclusively Hindu. 66.67% of the slum and only 25% in the urban area were Hindus. 50% of the drug users in the urban area were christians, whereas, 22.22% of the slum were Christians. Only a minority i.e, one each of the drug users, in both the slum and the urban areas were Muslim.

As regards occupation, 37.5% of the drug users from the village were unskilled, 18.75% skilled, 31.25% were farmers and 9.38% were businessmen. In the slum 44.44% were unskilled and 22.25% skilled. In the urban area, 25% were skilled, 25% were businessmen and 50% were students. 3.13% of the drug users from the rural and 33.33 % from the slum areas were unemployed.

As regards the frequency of drug use, 53.13% of the cannabis users in the rural area smoked cannabis once or twice, 34.38% almost weekly, 12.5% almost daily. In the slum, 22.22% used once or twice, 11.11% almost weekly and 11.11% almost daily. In the urban area, 25% used cannabis once or twice and 25% once a week. Tranquilizers were used almost daily by 25% of the urban sample. Inhalants were used by 22.22% of the slum dwellers almost daily. 11.11% of the slum dwellers have used barbiturates once or twice. Opium was used once or twice by the villagers and the heroin users from the slum and the urban area used heroin almost daily. Age of first drug use was lowest for the slum, followed by the urban sample. The rural users had first used drugs when

they were in their thirties. 71.88% of the villagers had first used drugs in the village temple and 28.13% in the fields. 67% of the slum dwellers had used drugs on the street and 11.11% at pub/bar, and 21.89% in the park. 25% of the urban residents had used drugs for the first time at a party and 50% in college.

While almost all the drug users in the village (83.38%), cite religious reasons for drug use, 44.44% of the slum dwellers and 75% of the urban residents cite curiosity as the main reason for drug use. 81.25% of the fathers of drug users in the village smoked, 65.63% used alcohol and 43.75% used drugs. 66.66% of the slum drug users reported that their fathers smoked, 77.77% that they drank, and 11.11% that they took drugs. 50% of the urban sample of drug users reported that their fathers smoked and 25% that they used alcohol occasionally. None of the mothers of drug users in the village, either smoked, drank or used drugs, whereas 22.22% of the drug users of the slum and 25% of the urban drug users reported that their mothers drank. About 9.38% of the drug users from the village claimed that they had no drug-using friends and 31.25% claimed that less than half their friends were drug users. 40.63% reported that about half their friends were drug users, whereas 18.87% reported that almost all their friends were drug users. 6.25% of the villagers claimed that they met their drug using friends once a week, and 9.38%, 2-5 times a week and 53.13% about once a week, 18.75%, 2-3 times a month and 12.5% once a month or less. The most common place of meeting was the temple (50%), or the fields (40.63%) and they mostly met them in the evenings (87.5%). The main reason for meeting their friends was to take drugs together (62.5%) and the remainder reported only social purposes for these meetings, (to exchange information 25%). 22.22% of the slum residents reported that less than half their friends were drug users, 33.33% reported that about half and 44.44% reported that almost all their friends were drug users. In the slums, most drug users, (55.55%) met their drug using friends almost daily, 22.22% at least 2-5 times per week. 55.55% spent almost all their free time with their drug using friends. The most frequent meeting places were the street (55.55%), and at work (22.22%). They preferred meeting their friends in the evenings (33.33%), or any time of the day (33.33%) and all day long (33.33%). Most drug users (66.66%), reported that, taking drugs together was the primary reason for meeting, selling drugs was also mentioned (11.11%).

50% of the urban drug users reported that less than half their friends were drug users and 25% each, that about half and almost all their friends were drug users. They usually met their drug using friends about once a week (50%), and 50% spent less than half their free time with their drug using friends. They usually met them at private parties (25%), pubs (25%) and parks (25%), mainly in the evenings (50%). The usual reason for meeting their friends was to plan

or attend social events (50%), to talk (25%) and to take drugs (25%). The age of first use was much higher in the village, whereas it was lowest for the slum. 20% of the slum dwellers were initiated into drugs between the ages of 10-14 years, whereas 50% of the urban drug dwellers, had used drugs for the first time between 15-19 years. The reason for first use cited by 84.38% of the rural drug users is mainly religious or ritual, whereas 55.55% of the slum dwellers cited boredom as the initiating factor. 75% of the urban drug users cited curiosity as the main reason for drug use.

The site of first use for 71.88% of the rural drug users was the temple, whereas 67% of the slum dwellers, used drugs for the first time in the street and 11.11% in a pub\bar. 50% of the urban drug users first tried drugs in the college, 25% in a pub and 25% in friend's residence.

88.89% of the drug users in the slum reported that they had no hobbies and hence a lot of leisure time, whereas, 71.88% of the villagers and 25% of the urban drug users had no hobbies.

88.89% of the slum dwellers had not participated in religious activities in the last year, whereas 81.25% of the rural drug users had attended religious activities once a week, 50% of the urban drug users attended religious activities once a week and 25% once a month.

Serious drug related problems were absent in the rural area, and only 6.25% expressed a need for medical help. In the slum on the contrary, 44.44% needed some help mainly to find a job (8.88%), to do things with their free time, and medical help (44.44%) were the common needs expressed. The urban dwellers reported that they did not need any help.

Trends:

The prevalence and pattern of drug use in the study shows marked differences between rural, urban and slum areas. The drug users from the rural area are generally older, male and like the rural population in general, they are uneducated or had few years of education, and almost all were employed. The use of drugs is for mainly religious reasons and are taken in a group, about once a week. Cannabis is the main drug of use in the rural area. The drug is used mainly in the temple, for ritual\ religious reasons.

In the slum, the drug users are much younger, with low levels of literacy, and were unemployed or employed in unskilled jobs. All types of drugs were abused, mainly inhalants and cannabis. Drug use was almost daily,

with friends, at street corners. Most of the drug users had no hobbies or leisure time activities. Their religious affiliation too was minimal. In the urban area, the users were younger, educated, and the drugs are used mainly for recreational purposes, with friends in the pubs, or college. The drug users were either students or employed.

Data presented in this report must be treated with extreme caution, in terms of incidence since the areas were not randomly selected. Because of the exploratory nature and a small number of subjects, the findings cannot be regarded as representative of the city as a whole.

AN EVALUATION OF DEMAND REDUCTION PROGRAMMES

The unprecedented surge of drug use in India in recent years, has caused grave concern, which calls for a concerted action. Demand reduction programmes providing prevention, treatment and rehabilitation are now accepted as an integral part of a balanced strategy to contain, combat and curtail drug abuse.

Since drug abuse, in all its aspects is embedded in culture, to be successful, the ideology of demand reduction programmes must be congruent with the drug users' cultural expectations.

Practitioners of modern methods of treatment have done little to apply sociological and anthropological knowledge to demand reduction programmes. To divorce any aspect of treatment response from its sociocultural determinants and context according to Edwards (1980), is akin to approaching a totem-pole or fetish object as only an object of abstract art.

Various folk, indigenous or social means of healing or treatment for addiction predated the development of modern systems. In India, like most Asian countries, drug addiction was traditionally, considered as a habit rather than an illness. Methods, to contain the habit in India, were inbuilt in the cultural traditions and social values. The sanctioned use was well controlled by restricting it to cultural festivals and rituals. The general norm of abstinence was stressed in religious scriptures and movements (Vedas, Upanishads, Manusmritis etc). Non conforming behaviour was penalized heavily by religious sanctions and social action (Mohan and Sharma, 1989). The methods to contain the habit, involved reduction of the dose gradually, or using opium pills, or tincture of opium, changing from opium smoking to opium eating, which not only cost less, but, produced a more gradual onset of drug effect.

Other methods used involved folk and religious treatment methods, such as wearing charms, exorcism, taking a pledge of abstinence for life from drugs, going on long pilgrimages to holy places. Further indigenous treatment methods such as herbal massages to purge drugs from the body, Ayurvedic, Siddha, and Nature Cure methods were widely used.

Culture and traditions of the people are closely woven with the philosophical concepts of their religions. The religious therapy that is practised depends on the religious orientation of the addict. Christians consider addiction

as a sin and an addict is helped to atone his sins. This is achieved by prayers, Bible reading, attending retreats, giving public testimonies etc. Physical and mental healing that takes place is because of the strong faith of the people. The religious leaders encourage the addict to give up drugs by emphasizing the religious point of view. The religious leaders further use group dynamics and social interaction and group sentiment in collective prayer.

Other cultural methods used are Yoga, Meditation and Agnihotra. Agnihotra, a Rigvedic ritual has been used to treat addicts. This ritual is supposed to bring about positive gains of physical and mental health and energy. This ritual is conducted to motivate a patient and to decrease his dependence on drugs. Agnihotra acts on the mind by producing a state of enhanced tranquility which counters the urge for drug and curbs the imagery of pleasant experience associated with its consumption. The vibrations generated during the ritual of Agnihotra is reported to have a beneficial effect (Golechha et al, 1987). Yoga and meditation have also been used in India, with good results to treat drug addiction. Vipassana meditation is a technique of self exploration to understand the laws of nature pertaining to oneself, which enables one to transform one's lifestyle and realize one's true potential. Pranic healing, in which a healthy person heals a sick person by releasing his energy to the other, is also used. Acupuncture has been used to relieve pain, agitation, anxiety and insomnia in drug addiction (Shah, DeSouza and DeSouza, 1984). Many centres incorporate religious approaches combined with psychotherapeutic approaches in the treatment of drug addiction. Good results have been quoted by use of religious therapies, such as Hare Krishna Movement, Krishna Consciousness or Christian Healing through the Charismatic Renewal. These methods provide social support, by means of group involvement. The accent is on total abstinence, a sedate life and faith in God. Detoxification camps which is an innovative method of treating a large number of addicts in their own environment is being used by voluntary agencies involved in demand reduction programmes.

In Bangalore, there are several such agencies and centres catering to the needs of addicts. In this section a review of such centres is made.

Objectives

1. To list and evaluate available demand reduction programmes.
2. To examine the adaptations to the present context that have been made by these different centres.

Methodology

In order to review the operation and evaluate drug reduction programmes, the strategies employed for prevention, treatment, and rehabilitation by these centres were documented using a special schedule. The institutions selected were involved in any one of the following fields of demand reduction, such as information, education, community development, crisis intervention, treatment, rehabilitation, social re-integration and after care.

The questionnaire, developed by the International council on Alcohol and Addictions, (1988) was adapted, to collect relevant details of the programmes. The questionnaire elicited details about theoretical bases in terms of educational, social, medical, religious and psychological outlook followed by the programme, the main activities, and adaptations made to suit the local needs. The success of the programme, the reaction of the community to the programme.

Services of 10 centres and one social service association involved in such programmes were reviewed. The centres evaluated vary, in respect of management, philosophy, manpower, and commitment. Some are extremely well run on professional lines, and some are marked by deep commitment. One or two projects are run as commercial ventures, with little public accountability. Some are run by voluntary agencies sponsored by the government. Some are exclusively private. Methodology also showed a great variation, with some using coercive technique, while others were eclectic. Some followed a medical model, while others emphasized the psychosocial aspects. Most of the programmes reviewed did not differentiate between alcoholism and drug addiction. The programmes were the same for both the groups. Some programmes use Western models without adaptation to our local needs.

Many of the programmes concentrate on educational, social and psychological measures to change the drug users behaviour after the completion of detoxification and do not incorporate detoxification within their own service.

However, there are a number of programmes which take into account the patterns of drug use and have used differing methodologies. It is reassuring to know that interesting and sensitive adaptation of ideas have taken place in some centres. For example, in the Antidrug Movement of Salesian Brothers, (Chetana), a lot of work and energy has gone into formulation of the programme to suit the needs of street children.

The drug treatment centres reviewed were mainly of two types. Hospital based detoxification centres and Non Governmental Organizations

involved in prevention, awareness building and education. The detoxification services are part of the psychiatric department services in a general hospital or psychiatric hospitals. The general pattern followed for detoxification is similar. Most addicts are admitted for detoxification for a duration of 2-5 weeks. In addition to detoxification, individual, group, marital or family therapy is provided. The patients are followed up for a period of 6 months to a year. Some centres encourage membership of Narcotic or Alcoholic Anonymous.

A number of centres have recognized the importance of the family as a unit within the Indian culture and have developed a close involvement of the family in their programme. Centres like Sparsha, Freedom Foundation, and Total Response to Alcohol and Drug Abuse (TRADA), have family therapy incorporated within their programme. Centre for Research Education Service and Training for Family Life Promotion, (CREST), and Lions Club have also taken the role of the family into consideration in their education and community programmes. Chetana has as its objective the integration of the street child with the family.

All the programmes reviewed are based in Urban areas, with limited resources and effort directed towards the rural population. Except for Chetana, no other centre has programmes tailored exclusively to the slum population.

Most of the programmes are directed at youth. Besides this, Chetana's programmes are directed towards rag pickers, who commonly abuse inhalants and cannabis.

Many programmes have recognized the need for a religious \ spiritual element in their programmes. Hope, TRADA and Chetana were started by religious organizations and prayer plays an important role in their programmes. Religious philosophy has been used by centres like TRADA, (Pranic Healing), Yoga and Vipassana meditation is used by Antidrug Action group, Chemical Addiction Information Monitoring, (CAIM), Freedom Foundation, Sparsha and TRADA. CREST has developed a module for personality development by value clarification.

The centres have different methodologies for manning their centres. CAIM uses ex-addicts for counselling. Sparsha uses student volunteers for some therapy sessions. Hope has enthusiastic students taking up sessions. Lions makes use of the Lionesses and Leos to reach the target groups.

The only centres which have provision for training staff are TRADA and CREST. TRADA's philosophy is to train local staff and move on to open new centres in other parts of the country. CREST has developed a training modules

for different categories of persons involved in demand reduction services.

All the treatment centres finance themselves by charging the patients except for CREST which is sponsored by the Government and aided .

Limitations in the programmes are evident. In some centres Western models are used without adapting to local conditions in the Indian cultural context. Adjustments are needed to fit our social, cultural or political circumstances, for example, the values that apply in the culture where the programmes operate, may differ from those of the country from which the model came.

Innovations and adaptations are needed in treatment models, so that they can fit into their unique sociocultural needs and resources in practical ways.

Deaddiction services are confined to middle and upper income groups. The methodology currently adopted by some centres caters to just a small segment of the universe of addicts. High fees are charged, when the centres are not subsidized by the government.

There was little emphasis given to social and vocational reintegration by most centres. A notable exception to this is Chetana.

Records are not maintained by most centres. Even where the records are maintained, the information is cursory. Very often the drugs consumed by the addicts are not noted. In many centres, no differentiation is made regarding whether the person is abusing alcohol or drug. Follow up notes are not written, hence it is difficult to assess the efficacy of the treatment provided. Further, there is no coordination between different centres and some centres appear to be in competition with each other. Net working among the institutions is not present.

The details of the demand reduction programmes studied are enclosed in Appendix 3.

DISCUSSION

An ambitious programme was drawn up at the beginning of the study to collect culturally specific and relevant information from as many and as varied sources as possible. In the previous sections, data obtained from various historical accounts, documents, case studies, informed persons, research reports and historical accounts have been presented. An effort is made to integrate the main findings of the study and present them here.

Pattern of drug use in rural, urban and slum areas:

Marked differences were observed in the prevalence and pattern of drug use between rural, urban and slum areas. The percentage of drug users in all the three areas selected is small, hence comparisons must be made with caution. Nevertheless vast differences in the habits, modes, reasons for drug consumption, as well as the venues, where drugs are consumed were observed in the rural, urban and slum areas.

In the village, drug use is limited to adults above 35 years and it is used as a religious custom. Cannabis is the only drug used, mainly in the temple or the field in a group smoking ritual. There is considerable social acceptance for cannabis use among the rural sample and many reported that the father or another member of the immediate family was using cannabis prior to their initiation. Further, drug users in the village are illiterate or have just a few years of education and almost all are employed in unskilled or skilled jobs. There is a belief that cannabis is energy giving and hence, it is also used whenever strenuous or monotonous work is to be done.

In the slum, the drug users are much younger, with low levels of literacy, mainly unemployed or employed in unskilled jobs. All types of drugs are abused, mainly inhalants and cannabis. Drug use is almost daily, with friends, at street corners. Most of the drug users have no hobbies or leisure time activities. Their religious affiliation too is minimal.

Drug users in the slum are virtually uneducated as they frequently drop out of school to augment the family income. Further, many are recent migrants from rural areas. Migration from the rural to urban areas in search of jobs, entails separation from family, friends and traditional values. The slum dwellers have little affiliation to religious institutions and no opportunities for productively using their leisure time. Hence drugs are taken as a form of escape to overcome boredom and problems of slum life.

In the urban area, the users are younger, educated, and the drugs are used mainly for recreational purposes, with friends in colleges or pubs. The drug users are either students or employed.

It is significant that drug use in the village is not viewed as a serious health, social or an economic problem. Drug taking is embedded in the customs and religious life of the villagers. This is particularly obvious as the villagers smoke cannabis openly. There is no social disapproval associated with cannabis smoking and the villagers adopt it through the normal process of socialization without an apparent conscious individual decision. The drug user is further not alienated from the mainstream of life in the village. Novice smokers learn from their elders in a general context of the socio-cultural and religious life of the village.

Further, drug taking is controlled in the village. It is contained by social conventions. Apart from age, there are rules which have protective value. Drug taking is done in a group, where a chillum (pipe) is shared by a group of 8-10 persons. Hence on an average a person smokes about 5-6 puffs and thus controls the quantity of drugs consumed. Moreover, social conventions limit the occasions of use. Cannabis is smoked about once a week, mainly in the evening or on a holiday.

In the urban areas (city and slum), drug taking is frowned upon and considered as an illegal activity. Hence it is a covert behaviour. Further, multiple drugs are used. In the slum, inhalant use is prevalent, as it can be easily stolen from two wheelers. There is a marked involvement in "hard" drugs like heroin (brown sugar). Further, criminalization of drugs is present with slum drug users peddling drugs, both to support their habit as well as to earn their livelihood. Hence drug use is viewed as a deviant activity. The social conventions do not control the type of drug nor the frequency nor quantity of the drug consumed. Drugs are taken any time of the day, in the street, pub\bar, school or college.

Besides the site and the type of drug consumed, the age of initiation differed markedly in the urban and rural areas. The slum and the city dwellers had their first experience with drugs before the age of 20 years, even as early as 12-13 years in the slum. The villagers on the contrary, were initiated into drug use only after the age of 30 years.

Whereas cannabis is smoked mainly for ritual and religious reasons in the village, drugs are taken in the slum more as an antidote to boredom and in the city as a "social lubricant".

In the city, drugs are used as a way "to get high", for curiosity, and for pleasure. Most urban drug takers are young, students or at early stages of their careers. Most are sociable and in frequent contact with their peers and therefore free to establish their own lifestyles. Drug taking is convivial, a part of general social involvement with peers. Since it is illegal, drugs are taken sometimes as a defiant act of rebellion, coupled with an imitation of western culture.

These findings force us to conclude that it is difficult to draw a precise line between drug use and abuse. Drug taking in villages is integrated into the socio-cultural life. It is thus an overt activity and could be called culturally accepted or syntonik. This overt activity is converted into a covert activity in the city due to a fear of police and family members, as it is contrary to social norms. This is one reason for the low percentage of cases detected in urban areas even when drug use is rampant. Different interpretations of drug use and abuse are thus made, depending on the social cultural background of the users and the control enforcing agency.

Regarding the prevalence of drug abuse in Bangalore, informed sources uniformly indicate a steady increase of abuse. Such opinions must be considered as highly tentative. The overall number of users is much more difficult to estimate because of its official illegality. However within a few years we have witnessed wide fluctuations in the prevalence of use of different drugs and their pattern of use both within and across socioeconomic and demographic subgroups.

The number of new cases appearing in each calendar year of persons who sought some treatment are presented in the table. With the exception of 1987 and 1988, the use of drugs has been steadily increasing in Bangalore. The peak year was 1992, with 86 new cases being registered at the different treatment centres. The impressionistic estimates of informed persons working in the field of drug abuse and the quantities of drugs seized by police confirm the above. Yet, this is only part of the issue regarding the existence of cases in the general population. Other related questions concern the length of time those who used a drug continued to use it as well as the extent of their use.

Further, most drug users reported that it is very easy to get drugs in Bangalore. It must be remembered that the increased drug use has necessarily changed the social climate surrounding drug use. Some of the conditions conducive to the spread of drug use currently exist to a far greater degree as can be seen in the steady increase in the number of cases registered at treatment centres, than was the case in the 1970s. The existence of these conditions will lead to more widespread use.

Cannabis remains the most commonly used illicit drug in Bangalore, other than alcohol and tobacco, which were not part of this study. Most informed persons also confirmed this finding. It is reported that drugs such as cannabis (ganja) is the first drug used by most persons who graduate to a stronger drugs such as heroin or to poly drug use. According to the addicts, multiple drugs are presently being abused by them. Cannabis is the most commonly and widely abused drug, followed by heroin\brown sugar, synthetic opiates (Tidegesic), tranquilizers and barbiturates.

The addicts reported that they generally use a combination of drugs, and substitute one drug for another, when the stock of their particular drug of choice is not available. The most common multiple drug combinations are cannabis, heroin\brown sugar, and synthetic opiates, with some using more than 8-9 drug combinations.

All drug users interviewed had used cannabis, and all who used heroin used cannabis. Cannabis hence is the "gateway drug". For multiple drug use, cannabis always preceded the use of other drugs. The use of heroin signifies the deepest involvement in the drug milieu. Persons who had used heroin were likely to have used all or most of the other drugs. All of those who had used heroin had also used cannabis, alcohol, barbiturates and sedatives. The use of alcohol precedes the use of other drugs for almost all users who had used alcohol and other drugs.

It is interesting to note that certain areas of Bangalore city are more "drug prone". Cantonment areas of Shivajinagar, Cox town, Fraser town, Brigade Road, Ulsoor and City Market area as the most drug prone areas in Bangalore. The analysis of case records of different treatment centres too shows a similar finding, with a majority of addicts hailing from the cantonment areas. This is confirmed by police records of seizures of drugs and of pedlars.

Age:

Age is a significant factor determining drug taking behaviour. Drug abuse is usually associated with adolescence and young adulthood. Information from all sources show that drug abusers mostly belong to the age groups of 15-35 years. 82.8% of the addicts interviewed belonged to the age group of 15-35 years. The data from treatment centres also indicated that 85.35% of the addicts enrolled were between the ages of 11- 35 years. The opinion of informed persons similarly confirmed this finding. Hence, the younger age groups are at least several times at greater risk than that observed for adults aged 35 and

older. The use of drugs has strong appeal to those who are beginning their struggle for independence as they search for self identity. Because of their innate curiosity and thirst for new experience, the young are particularly susceptible to the "drug experience". Drug use in the adolescents has been related to the normal developmental challenges, a part of risk taking behaviour (Baumrind, 1980).

Other studies and surveys done in India show that illicit drug takers are overwhelmingly young, mainly, in their teens, twenties and thirties (Chaudary 1982, Dube 1972, Rao, et al, 1978, Sethi et al, 1984, Verma, 1972).

Sex:

A strong and consistent relation between sex and drug use has been observed, with males being far more likely than females to use illicit drugs. This is consistent with the generally higher levels of alcohol and tobacco consumption amongst males than amongst females in India. The use of psychotherapeutics is more among women compared to other drugs. Previous studies have suggested that illicit drug experimentation is more prevalent amongst males than amongst females. Most studies suggest that males are roughly three times more likely to use drugs than females (Rao et al, 1978)

The involvement of males in drug abuse reflects a cultural sanction to use drugs and greater degree of freedom given to the male sex in our culture. This difference besides being a cultural factor, also reflects a greater conventionality and conforming behaviour in women observed even in western studies (Chien et al, 1964, Mohan et al, 1978). Further, Indian society is still conservative in its outlook, and drug use by women is generally unaccepted. Moreover, drug taking has been equated to risk taking behaviour, this behaviour is more associated with men than women. Further, the women in our culture are more likely to be family oriented, conformist or conservative than men. The use of tranquilizers by women has been attributed to their effect which leads to no social stigma, unlike other drugs which result in decreased inhibitions (Verma, 1979).

The major reason for lower incidence in women may be the strong and rigid sex role socialization practice in India. Especially in rural areas, a woman taking "drugs" in non religious or non therapeutic contexts is almost unthinkable. Such strong cultural sanctions may act as deterrants to drug taking behaviour in females. It may also be because, as some mental health professionals opine, women have "better coping skills". Females seem to be able to handle stress in ways that are better, culturally accepted than drug taking.

Marital Status:

In addition to age and sex, marital status is closely associated with drug use. Single persons are more likely to abuse drugs than married persons. Drug use among never married suggest that marriage, a conventional form of behaviour, may act as a restraint on drug use (NIDA, 1976). Further, individuals in stable and supportive social environments that marriage is likely to provide, may be less inclined to use drugs as a response to stressful life events. Young adults who do not settle into stable and traditional adult role are more likely to use drugs. A caveat however, is in order. Age and marital status are associated. Drug users being younger are more likely to be unmarried. In this study too, most users were unmarried and were initiated into the drug culture at a younger age.

Education:

The relationship between education and drug abuse does not lend itself to any simplistic explanation. The data from the treatment centres show that drug addiction is a problem among both the educated and uneducated class of people. Several hypotheses could be considered regarding how level of education influences drug taking. It is possible that drug use leads to increased drop out and thus lowered education level. Education may create awareness about risks involved with drug use and thus control drug abuse. And yet, formal education may not be a defense against drug abuse. The environment of educational institutions and peer group interactions may encourage the spread of drug use (Mohan and Sundarajan, 1987). It is possible that the educated abusers seek help for their problems more than the uneducated. A majority of interviewed addicts had dropped out of school, only a few had completed their graduation, with a few obtaining post graduate degree. Students seem to form a major proportion of current drug users.

Interestingly, drug addicts interviewed have been educated in private schools with English as their medium of instruction, supporting other studies (Mohan and Sundarajan, 1987). The nature of school attended tells us something about the context within which the drug is used and the availability of drugs to the students. Presumably, education in such schools permits exposure to a culture and behaviour patterns common to young adolescents in the west with simultaneous denial of one's own culture (Ray 1987).

Occupation:

The relationship of employment status to drug use suggests that a regular job

may serve as a restraining influence on the extent to which persons use drugs, or that drug users are less likely to find or seek fulltime employment. Military personnel and clerical workers have the lowest incidence of drug use. Housewives as a group also report the least use. This is not surprising as drug use among females is in general low. Students as a group have highest rate of abuse followed by such low status occupations as labourers. A relatively high level of drug use by respondents whose employment status is "student" may be largely a function of the relatively young age of most students rather than "student" status per se. Unemployed as a group have high incidence. But cause and effect relationship is not easy to work out. Employment and marriage are events occurring chronologically at a later date than the initiation of drug use. Unemployment may be a cause or effect of drug abuse.

Socio-economic status:

It is true that addicts come from all strata of society. Yet, there are indications that compared to the middle class, the upper and lower class subjects are more prone to abuse drugs. Material affluence is no guard against drug abuse. In fact, it may provide enough resources to an addict to maintain his/her costly habit. 71% of the cases registered at treatment centres belonged to middle class and 54% belonged either to upper or upper middle class families. Further, 31.4% of the addicts interviewed reported that their fathers were holding professional or managerial jobs and 34.3% were businessmen. An association between father's profession and therefore income and drug use in the offsprings is observed, with the prevalence of drug use showing a linear rise with father's occupation.

A common stereotype defines drug use as being largely a problem of lower socioeconomic groups. These perceptions are undoubtedly influenced by the high visibility and salience that drug dealing and drug related crime has attained in the public consciousness. Factors associated with low socioeconomic status such as lack of purchasing power to obtain drugs may work in the opposite direction (Maddahian, Newcomb and Bentler, 1986). In the slums, unemployed persons are the people at highest "risk". Not only do these people belonging to lowest economic level use drugs as an escape from hardships of unbearable life, they also peddle drugs and involve themselves in criminal activities.

Further, the data suggests that various types of drugs are used across the socioeconomic spectrum. Although heroin use was found to be more prevalent among the higher socioeconomic groups, other drugs like cannabis were being abused by all the socioeconomic groups. Hence a trend towards a

homogenization of cannabis use is apparent, whereas a decade ago, cannabis was more common among the highly educated. Hence sociodemographic differentials in drug use should be made tentatively and formulated within an historical and sociocultural context.

Religion:

According to the informed persons, though it is not possible to say which religious group has a higher number of addicts, they mentioned that drug abuse was more prevalent among the Christians, especially the Anglo Indians. One can hypothesize that the conflict regarding cultural identity, poverty, inability to merge into the major cultural stream may predispose Anglo-Indians to experiment with drugs. Also, alcohol is accepted in their life style. This relationship between alcohol and drugs is worth exploring.

Drug addicts who were interviewed in this study had less affiliation with traditional religious activities. Nearly 80% of the addicts did not attend any religious services or observe religious practices. Religious affiliation provides insight into an individual's current life style. Other studies too report similar findings (Gorsuch and Butler, 1976, Margulies et al, 1977, Jessor 1976, Schelegel and Sanborn, 1976).

Family type:

In nuclear families, alternate parental models, are not available. Further, supervision by other adults, and guidance is less than in joint families and the company of same age relatives tends to be less than in joint families. It has been suggested that "risk taking behaviour" being a normal adolescent behaviour would find greater opportunity for unchecked expression in nuclear families (Mohan et al, 1987). Hence joint family may help in reducing the severity of social stress and facilitate adequate coping responses. In this study too, 85.7% of addicts interviewed hailed from nuclear families.

Locality:

There is a significant difference in drug use depending on the milieu in which one is raised. Analysing the information from addicts in general, persons who lived in cities for the first 15 years of their lives were more likely to have used drugs than persons who resided in villages. The records of seizures of drugs and pedlars seems to confirm this finding.

It has been argued that urban environments offer a greater range of

competing cultural and normative systems than do suburban and rural settings (Lukoff, 1980). Urban environment lacks the strict social surveillance and prescriptions of a closely knit rural community. Spending the formative years in an urban setting exposes one to different normative expectations and may be conducive to drug use.

To summarize, the main conclusions emerging from the analysis of various sociodemographic factors indicate that drug users tend to be predominantly urban, male, belonging to younger age groups, educated in private English medium schools, unemployed or students, hailing from middle or upper social background and having little religious affiliation.

Age of first use:

The age of first use has been related to drug abuse, by several researchers (Robins and Przybeck, 1985, NIDA, 1976). The age of first use was also found to be a factor in whether someone becomes a "chronic user" (Hochman and Brill, 1971). Since 68.6% of the addicts had used drugs for the first time before the age of 25 years, and none were initiated into drugs after the age of 34 years, the normal range during which a drug has some probability of being tried is 10-25 years. 14.3% of the addicts interviewed had their first drug experience before the age of 14 years, and 54.3% had their first drug experience between the ages of 15-19. Similar trend was observed in the analysis of case studies, where 63.85% had used drugs for the first time by the age of 23 years. Among these, 20.94% had used drugs for the first time by the age of 16 years. Shearn and Fitzgibbons (1972), reported a relationship between age of first use of any drug and the extent of later involvement. They concluded that "at least among those who are psychologically vulnerable, the using of any drug before the age of 15, predicts with great accuracy, future drug involvement".

Reasons for initial drug use:

The reasons cited by majority of addicts for initial drug use were curiosity, experimentation and peer pressure. 80% of the addicts interviewed reported having friends using drugs. 71.4% of them had used drugs for the first time with their friends, and 68.6% first knowledge of drugs was from their friends. Moreover, 72.5% reported that when they first started using drugs, they obtained the drugs from their friends. Peer influence hence is one of the most important reasons for the initiation into drugs. This is substantiated by the fact that the most drug prone age at which a high percentage (70%), of addicts in this study were initiated into drugs were found to be between the 15-25 years of age, which is an age when the influence of peers is most pronounced. The

transmission of drug use through friendship network was also stressed by the informed persons. Earlier studies have similarly found both curiosity (Malhotra, 1990) and peer pressure (Choudary, 1992) as significant factors in initiation of drug use.

Peer Relationships:

Further, an important factor associated with illicit drug use is the pattern of drug use by the users' friend. 80% of the drug users had for the first time obtained drugs from friends. 71.4% had used drugs for the first time in company with friends.

Numerous studies document an association between adolescent illicit drug use and the use of drugs among their friends (Choudary, 1992, Ray, 1987). Hence, it appears that perhaps when they first tried various drugs many of them may have had qualms, misgivings and fears about them, when they were supported by friends, many may have been able to handle these obstacles. It is recognized that other people can serve as a source of reassurance to a novice. In the case of drug usage, they may provide knowledge of usage, techniques or reassurance that the particular supply of drugs on hand is safe to use. The mere familiarity of friends can be comforting because they are associated with previous pleasant experiences. Also affiliation can reduce specific fears and provide help in reducing uncertainty about appropriate behaviour in the unfamiliar drug situation. This modeling can instruct and also help in overcoming internal restraints (NIDA, 1976). Becker (1953) and Goode, (1969), have stressed that friends are important in influencing others to start using drugs, not only by supplying the drug, but by providing an example and defining the nature of the physical experience. A series of positive beliefs about the beneficial effects of drugs are constantly reinforced by their verbalization within the group (Becker, 1963). This interpretation is compatible with Sutherland's differential association theory (Sutherland and Cressy 1970), in which deviant behaviour is assumed to develop as a function of the preponderance of such behaviour in the peer group.

Drug use was also related to contact with drug using friends. Most drug users interviewed spent 7-8 hours a week with their drug using friends. The friendship pattern reflects the choice of associates and partially explains continuation of drugs. 51.4% of the drug users spent all their free time with them. 77% said that they saw their friends every day. Schachter and Singer (1962) and Becker, (1963, 1967), have stressed the importance of circumstances surrounding drug use, especially the behaviour of others present. Initiation to drugs is heavily influenced by peers. In this study, 80% of addicts interviewed

reported that their friends used drug. Further more, most subjects in this study, reported that they were introduced to drugs by a close friend. Other studies have also found strong relationship with friends' use Kandel (1973). In all of these studies, association of drug usage with peer use were stronger than those with other background variables, such as parental drug use.

Reasons for continued drug use:

Multiple reasons were attributed by drug users for continued drug use. The most frequently cited reasons for use are to get a kick, to forget worries and depression, to sleep, to relax, etc. "To sleep" and "to relax" were mentioned by sedative users, and "to get through the day" mentioned for barbiturates. Some of the sedative and tranquilizer use appears to be quasi-medical. Some of it especially tranquilizers and sedative use appear to have been instrumental and quite possibly functional in that drugs were used to facilitate work and rest. Some of the drug use seems to reflect dependence as well as an effort to cope with life.

Most common reason for use fell under the general rubric of recreational use or use for the effect of the drug.

Becker (1953), offered the explanation that one learns to like drugs and to deal with reasons against its use in the process of using the drugs, the "teachers are the users with whom one associates". According to the informed persons the availability of drugs and peer group influences are strong determinants of drug usage. Certainly no one can take a drug that is not available.

Site of drug use:

The setting of usage is important in that it contains modes of behaviour and conveys the appropriate behaviour. Majority of the addicts interviewed took drugs for the first time in school\college, bar\pub or at their friends residence. The degree to which the respondents inhabit the settings, is likely to facilitate or retard usage and the degree to which he finds he can and desires to control the amount of his participation in them (Goldstein, 1970).

Hence it appears that schools and colleges are breeding ground for drug abuse. Students seem to be most susceptible to drug use and peer pressure is the most important factor in drug abuse with schools and colleges being the places where drugs are first tried. Further, the reasons for trying a drug for the first time is peer pressure and curiosity but susceptibility and continued use

of drugs reaching a level of addiction could be due to psychological reasons and family problems.

Family factors:

Young people often start using drugs in response to parental behaviours and the widespread use of legal drugs in society at large (Kandal, 1974). The legal substances include alcohol and tobacco. In this study, a large percentage of the addicts interviewed, reported that their fathers and brothers, smoked and consumed alcohol. They may act as a role model and a sanction to use drugs.

According to the informed persons, one of the main reasons for drug abuse, is family pathology, such as neglect from parents, physical abuse etc. Family instability, resulting in single parent households may also influence the prevalence of drug use through its impact on children. 51.4% of the addicts interviewed perceived their fathers as strict, 11.4% as hostile and 20% as indifferent. Similar findings were reported by Monterio (1987), where she found drug abuse to be an indication of a failing family system. Devi (1987) found drug abusers coming from dysfunctional and disengaged family backgrounds. They perceived their fathers as strict, punitive, authoritarian and unapproachable. Many studies have found that drug users are usually subjected to deficient parenting styles particularly those involving over or under domination or rejection (Brauch et al, 1973). Hence, it is apparent that interpersonal relationships like family and peers are powerful influences on drug taking behaviour. The drug user seems to be more likely to be influenced by friends, have friends' models and approval for drug use.

Problems associated with drug use:

Drug users were in general agreement regarding problematic effects of drugs. 74.3% of the drug users perceived drug effects as bad or very bad. A large percentage of addicts reported impaired functioning within family, social health, economic or occupational domains. 20% of the drug addicts interviewed had attempted suicide. The informed persons from their experience reported that all aspects of life of the addicts are affected because of drugs and they further suffer from alienation, poverty, marginalization, stigmatization and harassment from the police.

There is also an association between drug use and self reported criminal activities. Drug use leads to crime, as most of the addicts reported resorting to antisocial activities like peddling drugs to support their drug habit. Other studies show that though some addicts get involved in criminal activities

after becoming dependent, a majority are engaged in such activities before the onset of dependence (Weissman et al, 1976, Anglin, Kaplan and Sells, 1983).

Treatment:

The data from the treatment centres reveals that 70.6% of the addicts were using drugs for less than 5 years and 23.5% for 6-11 years, only 5.9% for 12-17 years. There are claims that addiction may be a self limiting illness never lasting beyond 8 or 9 years (Winnick, 1964). On the other hand, there are others who contest this view by stating that addiction is a recurrent illness and the recurrences may appear after several years of abstinence (Singer, 1975). In this study, many of the addicts interviewed had several relapses. Of 54.3% of the addicts who sought treatment, more than half had been admitted as many as three times. The common reasons cited for relapse are craving, easy availability of drugs and influence of old friends. The reasons for discontinuing drugs were nonavailability of drugs, effect of drugs on health, family support, avoiding contact with friends who take drugs, getting involved in an occupation or athletic or recreational pursuit. The most frequently stated reasons for discontinuing drugs were expedient and practical ones, rather than expressions of moral convictions or "family or friends would not approve".

Drop out rates of addicts from treatment is quite high. 43% of the addicts registered at treatment centres had dropped out from treatment. Informed persons involved in treatment of drug abuse similarly reported that from their experience, readdiction rates were quite high.

69.9% of the drug users had received treatment prior to the interview. Whether or not treatment was successful is a question that will require further analysis. 35% of the drug users who had been treated for drug abuse had reduced or stopped their use after treatment. 29.9% stopped for 1-4 years, 20% for no more than 4 months and 31.4% for only 1-15 days. Most of the addicts were treated for detoxification and only a few had received either individual or group therapy. 65% of the addicts who had received treatment for drug addiction were currently using drugs. Most treatment for drug abuse involved hospitalization, with minimum aftercare services.

In summary, relatively few users of any drug received treatment for drug use. It may be assumed that use of a drug must extend over a considerable period of time before it troubles the user sufficiently that he seeks treatment or before it brings him to the attention of others who pressurize him to seek treatment. The low incidence of treatment in this sample may be a function of

the age of the respondents and the fact that they had been using drugs for a relatively short time. Among those who continue to use some of these drugs, it is likely that the percentages who eventually are treated will be higher.

Needs assessment:

The most commonly expressed needs by addicts were for help in finding a job, help in using their leisure time, medical attention and family counselling. The major problem areas hence seem to concern employment and leisure activities. Since there is a strong association between drug abuse and problems in finding employment and poor use of leisure time especially in the slum, programmes should be directed at improving the quality of life of the youth. Further, the addicts reported a need for treatment. The most commonly mentioned treatments were medical, detoxification and family counselling. Very few addicts had received treatment in the past year. Therefore this appears to be an important unmet need for drug abuse treatment. The informed persons emphasized the importance of the family and the community in the identification, treatment and rehabilitation of the addicts. Intervention procedures suggested by the informed persons and the addicts emphasize the role of social ecology of the drug users. The involvement of the family in all aspects of drug abuse from prevention and after care has been particularly stressed.

Preventive measures:

Prevention measures advocated by addicts and informed persons are awareness programmes, skills training, programmes for families and peers, and strict enforcement of laws. Both the informed persons and the addicts reported that rehabilitation and after care facilities for addicts are almost nonexistent in Bangalore. Further there are no facilities to treat addicts in the community. Only a few addicts were aware of the activities being conducted by voluntary organizations and social service clubs. They also reported that the treatment services are inadequate, expensive and accessible only to a few. Rehabilitation and after care programmes are almost nonexistent in Bangalore.

Though some centres involved in demand reduction programmes have made adaptations in their programmes to suit the local needs, much still needs to be done. Flexibility and sensitivity to local circumstances will enhance the usefulness of such centres.

Conclusions:

At the end of surveying the field of drug abuse and scanning through the data, the following broad conclusions can be drawn.

- * Historical and socio cultural factors not only define the concept of drug use and abuse, they also influence the extent and pattern of drug use.
- * Drug abuse is steadily increasing in Bangalore, with cannabis and multiple drugs being most commonly abused.
- * Cultural orientations, goals and beliefs influence differential patterns of drug use.
- * Sociodemographic factors like age, sex, educational status, occupation and locality play a significant role in drug abuse
- * Drug abuse has wide socioeconomic and health consequences.
- * Urban, young male, unemployed or student from affluent family is at risk for drug abuse.
- * The course of drug abuse is characterized by relapses.
- * Demand reduction programmes that are sensitive to local needs are essential to combat this problem. Adaptations in demand reduction programmes to meet sociocultural needs are necessary.

Limitations:

The data are presented descriptively and the analysis is based largely on percentage differences. More rigorous statistical analysis is needed, but it will require more time than was available for the preparation of this report. Time has also limited the number of relationships that could be examined. The interview schedule is rich in variables not yet examined.

The geographical regions for the survey were not randomly selected and hence may not be representative of each of the regions. Caution must therefore be exercised in generalizing the finding of this study to the total population.

Implications:

- * Since drug abuse is a diverse phenomenon with individuals using drugs in a variety of ways for a variety of reasons, preventive and intervention programmes must be targeted at specific populations. Hence modules of prevention/ intervention need to be developed for different types of populations of drug users, like urban, rural and slum populations.
- * Since peers and family have a great influence on drug use, these forces

could also be constructively used to combat drug abuse.

- * This study has shown that the age of onset for illicit drug use is between 10-15 years, the target group for our preventive/ameliorative efforts should be the preadolescent. Awareness programmes should be started in schools.
- * Poverty, unemployment and unstructured leisure drives the urban poor to drug abuse and drug peddling. Hence a comprehensive approach that improves the quality of life is essential.

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APPENDIX 1

Table 1. DRUGWISE STATEMENT SHOWING THE NUMBER OF CASES & QUANTITY SEIZED OF NARCOTIC DRUGS/PSYCHOTROPIC SUBSTANCES IN INDIA DURING THE YEARS 1981-1992 (upto 30-5-92)

Years	Opium		Morphine		Heroin		Ganja		Charas/Hashish		Cocaine		Methaqualone		Amphetamine	
	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized	No.of cases	Qty seized
1981	673	5326	37	30	17	8	177	25861	355	898	5	4	3	69	-	-
1982	577	5073	16	17	45	34	160	13170	296	1640	1	-	15	267	-	-
1983	646	6592	17	21	99	139	383	26185	299	6072	2	-	8	95	-	-
1984	496	7939	22	29	92	203	259	21208	203	4368	2	5	95	1669	-	-
1985	489	6840	78	125	131	761	254	66314	192	10312	1	5	42	745	-	-
1986	1692	8789	45	307	405	2621	684	60619	374	18909	9	26	19	1485	-	-
1987	433	2929	38	115	351	2747	635	53920	301	14796	6	5	59	1500	6	45
1988	512	3304	24	23	489	3029	592	45994	419	17523	3	13	887	40	1	9
1989	1658	4855	14	92	1248	2714	3612	54463	687	8179	23	3	75	887	2	1
1990	506	2114	27	6	764	2193	1782	39090	753	6388	2	1	60	2141	0	0
1991	566	2145	21	6	1158	622	3140	52633	335	4413	1	.008	78	4415	0	0
1992	123	385	18	4	228	354	886	11776	327	898	-	-	35	2414	-	-

Source: Central Bureau of Narcotics, Govt. of India

Table 2. SOURCE-WISE QUANTITY OF DRUGS SEIZED AND THEIR PERCENTAGE AS SHOWN IN BRACKETS

Name of drugs	<u>1987</u>		<u>1988</u>		<u>1989</u>		<u>1990</u>		<u>1991</u>		<u>1992 (upto 30-5-92)</u>	
	Qty	(%)	Qty	(%)	Qty	(%)	Qty	(%)	Qty	(%)	Qty	(%)
	seized		seized		seized		seized		seized		seized	
A. GOLDEN CRESCENT												
Opium	89	(3.0)	41	(1.4)	4	-	-	-	75	(3.4)	-	-
Morphine	3	(2.6)	-	-	2	(20.0)	-	-	-	-	-	-
Heroin	2301	(83.7)	2468	(81.4)	1635	(60.2)	1697	(77.4)	438	(77.65)	284	(80.22)
Ganja	-	-	-	-	-	-	-	-	-	-	-	-
Hashish	6885	(43.1)	14866	(84.8)	3892	(47.6)	3892	(47.6)	2320	(52.5)	358	(39.86)
Cocaine	-	-	-	-	-	-	-	-	-	-	-	-
Methaqualone	61	(4.0)	34	(2.0)	-	-	-	-	-	-	-	-
Amphetamine	20	(44.4)	-	-	-	-	-	-	-	-	-	-
B. GOLDEN TRIANGLE												
Opium	-	-	2	-	2	-	-	-	-	-	2	-
Heroin	2	-	5	(0.1)	20	(0.8)	9	(0.4)	12	(1.92)	4	(1.13)
Ganja	-	-	6	-	-	-	6	(0.2)	4	-	16	(0.14)
Methaqualone	1	-	-	-	-	-	-	-	-	-	-	-
C. NEPAL												
Opium	2	(0.78)	-	-	-	-	-	-	-	-	-	-
Heroin	1	-	-	-	-	-	-	-	3	(0.48)	-	-
Ganja	37558	(69.6)	21123	(45.9)	8534	(15.7)	11781	(30.13)	4055	(7.7)	2124	(18.5)
Hashish	737	(4.9)	735	(4.2)	1316	(16.6)	1124	(15.16)	1302	(29.50)	357	(39.76)

Source: Narcotic Control Bureau (NCB), New Delhi.

Table 3. QUANTITY OF NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES SEIZED IN IMPORT/EXPORT AND INTERNAL TRAFFIC IN INDIA DURING 1989,1990,1991 & 1992 (upto 31-5-92)

Name of drugs	1989 Qty. seized	1990 Qty. seized	1991 Qty. seized	1992 Qty. seized
A. ILLEGAL IMPORT				
Opium	11	-	75	3
Morphine	2	-	-	-
Heroin	1654	1046	66	18
Ganja	8534	16430	3367	2214
Hashish	5252	3728	1570	717
Cocaine	-	-	-	-
Methaqualone	-	-	-	-
Amphetamine	-	-	-	-
B. ATTEMPTED EXPORT				
Opium	37	-	-	-
Morphine	-	-	3	-
Heroin	368	528	191	20
Ganja	230	173	-	9
Hashish	35	17	-	8
Cocaine	-	-	-	-
Amphetamine	-	-	-	-
Methaqualone	586	1515	2349	1096
C. INTERNAL				
Opium	4808	2114	2017	382
Morphine	9	6	3	4
Heroin	691	622	365	316
Ganja	45699	22505	49266	9553
Hashish	2892	2643	2843	173
Cocaine	3	-	0.008	-
Methaqualone	301	626	2066	1318
Amphetamine	1	-	-	-
Phenobarbitone	720	-	-	-
Poppy Husk	34760	48834	45956	7285

Source: NCB, New Delhi.

Table 4. STATEMENT SHOWING THE NO. OF CASES AND QUANTITY SEIZED OF OPIUM AND OTHER NARCOTICS DRUGS AND PERSONS ARRESTED/PROSECUTED DURING THE YEARS 1987,1988,1989,1990,1991 AND 1992 (UPTO 30-6-92) BY THE CENTRAL BUREAU OF NARCOTICS

Years	No.of cases	Opium No.of persons arrested/ prosecuted	Qty seized in Kgs	No.of cases	Morphine No. of persons arrested/ prosecuted	Qty seized in Kgs	No.of cases	Heroin No. of persons arrested/ prosecuted	Qty seized in Kgs
1987	105	121	697.237	2	2	1.050 + 283 amps	13	16	16.494
1988	95	100	1049.115	4	6	2.432	10	13	6.334
1989	134	130	683.055	8	-	5.575 + 177 amps	19	30	9.490
1990	74	86	451.875	1	-	19 amps	24	34	20.900
1991	63	78	595.698	3	1	2.070	24	24	22.822
1992 (upto 30-6-92) Provisional	38	48	329.180	3	-	0.280	16	20	7.480

Source: NCB, New Delhi

Table 5. STATISTICAL INFORMATION REGARDING SEIZURE OF ILLICIT NARCOTIC DRUGS BY THE KARNATAKA POLICE (upto July 1993)

Sl. No.	Years	No. of cases	No. of persons involved	Opium Kg. gms	Ganja Kg. gms	Charas Kg. gms	Heroin Kg. gms	Ganja plant No.	Hash. Kg.	Prod. Tabs. No.	Mandrax Tabs. No.	Mor-E	Peth.	Brown Sugar Kg. gms	Cocaine in
1.	1987	130	197	0.040	1538.92	0.950	-	842	-	1000	114	440	14	-	-
2.	1988	224	264	0.254	410.237	-	82.774	221	-	-	-	-	-	3.700	-
3.	1989	185	265	0.155	355.952	-	1.425	551	-	-	-	-	-	0.500	-
4.	1990	127	169	5.835	336.159	3.800	1.725	1031	-	-	-	-	-	32.305	-
5.	1991	90	110	-	47.771	-	1.800	423	-	-	-	-	1 tube	00.111	-
6.	1992	80	104	-	605.720	0.640	-	240	-	-	-	32	-	00.53	0.37
7.	1993	54	86	900	388.393	0.180	-	860	-	-	1	-	-	2.500	-

Table 6. SHOWING THE NUMBER OF CASES BOOKED UNDER N.D.P.S. ACT DURING 1988-1992 IN BANGALORE CITY

Years	Ganja		Heroin		Opium		Charas		Cocaine						
	No.of cases	Qty seized in Kgs	No.of persons involved	No.of cases	Qty seized in Kgs	No.of persons involved	No.of cases	Qty seized in Kgs	No.of persons inv.	No.of cases	Qty seized in Kgs	No.of persons inv.			
1988	125	163.290	160	35	0.369	45	7	0.197	8	-	-	--	-	--	
1989	113	155.393	154	13	1.425	24	1	1.05	1	-	-	-	1	0.078	2
1990	54	130.385	74	11	22.734	19	3	4.41	4	2	3.8	2	-	-	-
1991	36	43.925	43	5	61.947	9	-	-	-	-	-	-	1	0.078	2
1992	40	379.08	53	6	53.057	8	-	-	-	1	15 gms	1	-	-	-

Table 7. SHOWING SEIZURE OF DRUGS - BANGALORE CITY
POLICE CUSTOMS

Years	Ganja (Kgs)	Opium (Kgs)	Charas (Kgs)	Heroin (Kgs)	Psy.sub (Tab./Inj.)	Years	Ganja (Kgs)	Opium (Kgs)	Charas (Kgs)	Heroin (Kgs)	Psy.sub (Tab./Inj.)
1985	99.795	0.385	18.01	0.2545	106	1985	-	-	-	-	-
1986	95.94	0.52	-	0.249	19	1986	100.00	0.03	-	-	-
1987	237.198	0.52	0.82	1.2638	568	1987	26.73	-	-	-	-
1988	164.29	0.197	-	0.35	-	1988	-	21.5	-	4.061	-
1989	153.393	0.105	0.078	0.00143	-	1989	-	-	-	4.48	-
1990	107.36	1.61	2.5	1.734	-	1990	4.05	-	-	1.0	-
1991	35.02	2.8	1.3	0.00003	-	1991	-	-	-	-	-

Table 7 contd... STATE EXCISE

Ganja Years	Opium (Kgs)	Charas (Kgs)	Heroin (Kgs)	Psy.sub (Tab./Inj.)	
1985	58	16.0	-	-	-
1986	670	0.002	-	-	-
1987	679	-	1	-	-
1988	287	-	-	-	-
1989	322	-	-	-	-
1990	70	-	-	-	-
1991	-	-	-	-	-

Table No. 8(a) CASES REGISTERED AT DIFFERENT TREATMENT CENTRES FROM 1971 TO 1993

Drug	1971 No (%)	1972 No (%)	1973 No (%)	1974 No (%)	1975 No (%)	1976 No (%)	1977 No (%)	1978 No (%)	1979 No (%)	1980 No (%)	1981 No (%)	1982 No (%)
1. Total Drug users	3 (0.39)	1 (0.13)	5 (0.65)	6 (0.78)	9 (1.17)	7 (0.91)	8 (1.04)	6 (0.78)	12 (1.57)	12 (1.57)	14 (1.83)	16 (2.1)
2. Multiple Drug users	-	-	4 (0.28)	1 (0.28)	1 (0.28)	7 (2.0)	3 (0.85)	4 (1.14)	1 (0.28)	6 (1.7)	7 (2.0)	6 (1.07) 6 (1.7)
3. Cannabis	1 (0.5)	-	-	1 (0.5)	1 (0.5)	1 (0.5)	4 (1.9)	3 (1.4)	3 (1.4)	5 (2.4)	4 (1.9)	8 (3.8) 7 (3.3)
4. Heroin	-	-	-	-	-	-	-	-	-	-	-	- 1 (1.2)
5. Opiates	-	-	1 (1.85)	1 (1.85)	-	-	-	1 (1.85)	1 (1.85)	1 (1.85)	-	- - 1 (1.85)
6. Amph.	-	-	-	-	2 (50.0)	-	-	-	-	-	-	- - -
7. Opium	-	-	-	-	-	-	-	-	-	-	-	- - -
8. Tranq.	-	-	-	1 (3.3)	-	-	-	-	-	-	1 (3.3)	- - - -
9. Barb. Sedatives/ Hypnotics	2 (11.8)	2 (11.8)	1 (5.9)	2 (11.8)	1 (5.9)	-	-	-	1 (5.9)	-	-	- - 1 (5.9)

Drug	1983 No (%)	1984 No (%)	1985 No (%)	1986 No (%)	1987 No (%)	1988 No (%)	1989 No (%)	1990 No (%)	1991 No (%)	1992 No (%)	1993 No (%)
1. Total Drug users	16 (2.1)	24 (3.13)	68 (8.9)	46 (6.0)	30 (3.9)	14 (1.83)	70 (9.14)	97 (12.66)	103 (13.4)	144 (18.8)	52 (6.79)
2. Multiple Drug users	10 (2.85)	14 (4.0)	32 (9.1)	17 (14.85)	13 (3.7)	3 (0.85)	34 (9.7)	36 (10.28)	52 (14.8)	61 (17.12)	35 (10.0)
3. Cannabis	3 (1.4)	2 (0.9)	6 (2.88)	5 (2.4)	3 (1.42)	6 (2.84)	34 (16.11)	32 (15.16)	35 (16.58)	35 (16.58)	12 (5.68)
4. Heroin	-	-	1 (1.2)	22 (25.9)	16 (18.8)	11 (12.9)	2 (2.4)	-	6 (7.1)	4 (4.7)	19 (22.4) 3 (3.5)
5. Opiates	3 (5.55)	5 (9.2)	6 (11.1)	7 (12.9)	2 (3.7)	1 (1.85)	1 (1.85)	3 (5.55)	6 (11.1)	13 (24.0)	1 (1.85)
6. Amph.	-	-	-	-	-	-	-	1 (25.0)	-	-	1 (25.0) - -
7. Opium	-	-	1 (6.7)	1 (6.7)	-	1 (6.7)	2 (13.33)	1 (6.7)	6 (40.0)	1 (6.7)	2 (13.3) - -
8. Tranq.	-	-	1 (3.3)	1 (3.3)	1 (3.3)	-	-	-	10 (33.3)	2 (6.7)	12 (40.0) 1 (3.3)
9. Barb. Sedatives/ Hypnotics	-	-	-	-	-	-	-	-	3 (17.6)	3 (17.6)	1 (5.9) - -

Table No. 8(b) SOCIODEMOGRAPHIC CHARACTERISTICS
AGE

Drug	11-16 No (%)	17-22 No (%)	23-28 No (%)	29-34 No (%)	35-40 No (%)	41-46 No (%)	47-52 No (%)	53-58 No (%)	59-64 No (%)	65-70 No (%)	71-76 No (%)
1. Total Drug users	11 (1.42)	165 (21.37)	317 (41.06)	166 (21.5)	63 (8.16)	27 (3.49)	13 (1.68)	4 (0.52)	3 (0.38)	2 (0.26)	1 (0.13)
2. Multiple Drug users	8 (2.25)	91 (25.56)	144 (40.45)	79 (22.19)	24 (6.74)	6 (1.68)	2 (0.56)	1 (0.28)	-	1 (0.28)	-
3. Cannabis	2 (0.9)	44 (20.9)	80 (37.9)	42 (19.9)	23 (10.9)	10 (4.7)	7 (3.3)	2 (0.9)	1 (0.5)	-	-
4. Heroin	-	13 (15.3)	47 (55.3)	20 (23.5)	3 (3.5)	1 (1.2)	1 (1.2)	-	-	-	-
5. Opiates	-	10 (18.52)	25 (46.3)	10 (18.52)	1 (1.85)	5 (9.26)	2 (3.7)	-	1 (1.85)	-	-
6. Amph.	-	1 (25.0)	-	2 (50.0)	-	1 (25.0)	-	-	-	-	-
7. Opium	-	2 (13.3)	5 (33.3)	3 (20.0)	3 (20.0)	1 (6.7)	-	-	1 (6.7)	-	-
8. Tranq.	1 (3.3)	2 (6.7)	9 (30.0)	6 (20.0)	8 (26.7)	2 (6.7)	1 (3.3)	-	-	1 (3.3)	-
9. Barb. Sedatives/ Hypnotics	-	2 (11.8)	7 (41.2)	4 (23.5)	1 (5.9)	1 (5.9)	-	1 (5.9)	-	-	1 (5.9)

Table 8(c) SEX			Table 8(d) URBAN/RURAL	
Drug	Male No (%)	Female No (%)	Urban No (%)	Rural No (%)
1. Total Drug users	712 (92.2)	60 (7.77)	740 (95.85)	32 (4.15)
2. Multiple Drug users	327 (91.85)	29 (8.15)	344 (96.6)	12 (3.37)
3. Cannabis	206 (97.6)	5 (2.4)	195 (92.4)	16 (7.6)
4. Heroin	80 (94.1)	5 (5.9)	85 (100.0)	-
5. Opiates	53 (98.15)	1 (1.85)	54 (100.0)	-
6. Amphetamine	3 (75.0)	1 (25.0)	3 (75.0)	1 (25.0)
7. Opium	15 (100.0)	-	13 (86.7)	2 (13.3)
8. Tranquilizers	15 (50.0)	15 (50.0)	29 (96.7)	1 (3.3)
9. Barbiturates Sedatives/ Hypnotics	13 (76.5)	4 (23.5)	17 (100.0)	-

Table 8(e) MARITAL STATUS				Table 8(f) RELIGION			
Drug	Married No (%)	Single No (%)	Divorced No (%)	Hindu No (%)	Muslim No (%)	Christian No (%)	Jew No (%)
1. Total Drug users	234 (31.48)	521 (67.49)	8 (1.04)	417 (54.0)	67 (8.68)	286 (37.05)	2 (0.25)
2. Multiple Drug users	87 (24.4)	264 (74.15)	5 (1.40)	173 (48.6)	32 (8.99)	150 (42.13)	1 (0.20)
3. Cannabis	79 (37.4)	132 (62.6)	- -	128 (60.7)	9 (4.3)	74 (35.1)	- -
4. Heroin	19 (22.4)	64 (75.3)	2 (2.4)	38 (44.7)	13 (15.3)	34 (40.0)	- -
5. Opiates	20 (37.04)	34 (63.0)	- -	24 (44.4)	9 (16.7)	20 (37.04)	1 (1.85)
6. Amphetamine	2 (50.0)	2 (50.0)	- -	3 (75.0)	- -	1 (25.0)	- -
7. Opium	8 (53.3)	7 (46.7)	- -	10 (66.7)	2 (13.3)	3 (20.0)	- -
8. Tranquilizers	21 (70.0)	9 (30.0)	- -	25 (83.3)	2 (6.7)	3 (10.0)	- -
9. Barbiturates Sedatives/ Hypnotics	7 (41.2)	9 (52.9)	1 (5.9)	16 (94.1)	- -	1 (5.9)	- -

Table 8(g) SOCIO-ECONOMIC STATUS

Drug	Middle Class No (%)	Lower No (%)	Upper middle No (%)	Upper No (%)	Lower middle No (%)
1. Total Drug users	160 (50.2)	26 (8.2)	37 (11.6)	73 (22.9)	23 (7.2)
2. Multiple Drug users	71 (51.1)	7 (5.0)	17 (12.2)	37 (26.6)	7 (5.0)
3. Cannabis	42 (55.3)	10 (13.2)	8 (10.5)	7 (9.2)	9 (11.8)
4. Heroin	26 (49.05)	5 (9.43)	3 (5.7)	18 (34.0)	1 (1.9)
5. Opiates	13 (46.4)	1 (3.6)	4 (14.3)	8 (28.6)	2 (7.14)
6. Amphetamine	- -	- -	- -	- -	- -
7. Opium	1 (9.1)	3 (27.3)	5 (45.5)	- -	2 (18.2)
8. Tranquilizers	2 (66.7)	- -	- -	1 (33.3)	- -
9. Barbiturates Sedatives/ Hypnotics	5 (55.5)	- -	- -	2 (22.2)	2 (22.2)

Table 8 (h) OCCUPATION

Drug	Unemployed		Student		Business		Prof./ Managerial		Retd.		Unskilled	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Total Drug users	182	(23.61)	190	(24.64)	102	(13.23)	121	(15.7)	1	(0.13)	60	(7.78)
2. Multiple Drug users	97	(27.2)	95	(26.7)	38	(10.62)	64	(17.97)	-	-	23	(6.46)
3. Cannabis	45	(21.3)	52	(24.6)	24	(11.4)	21	(10.0)	-	-	27	(12.8)
4. Heroin	21	(25.0)	18	(21.4)	16	(18.8)	12	(14.2)	-	-	3	(3.5)
5. Opiates	11	(20.4)	14	(25.92)	10	(18.5)	12	(22.2)	-	-	4	(7.4)
6. Amphetamine	1	(25.0)	1	(25.0)	2	(50.0)	-	-	-	-	-	-
7. Opium	2	(14.2)	3	(21.42)	4	(28.57)	1	(6.7)	-	-	2	(13.3)
8. Tranquilizers	4	(13.3)	4	(13.3)	5	(16.7)	6	(20.0)	-	-	-	-
9. Barbiturates Sedatives/ Hypnotics	1	(5.9)	3	(17.6)	3	(17.6)	5	(29.4)	1	(5.9)	1	(5.9)

Drug	Skilled		Agri- culture		Military		Clerical		House wife		Total	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Total Drug users	73	(9.47)	9	(1.17)	1	(0.13)	12	(1.56)	18	(2.23)	769	(100.0)
2. Multiple Drug users	25	(7.02)	2	(0.56)	-	-	5	(1.4)	6	(1.68)	355	(46.16)
3. Cannabis	31	(14.7)	6	(2.8)	1	(0.5)	3	(1.4)	1	(0.5)	211	(27.44)
4. Heroin	11	(13.09)	-	-	-	-	1	(1.2)	2	(1.2)	84	(10.92)
5. Opiates	3	(5.6)	-	-	-	-	-	-	-	-	54	(7.02)
6. Amphetamine	-	-	-	-	-	-	-	-	-	-	4	(0.52)
7. Opium	1	(7.1)	1	(7.1)	-	-	-	-	-	-	14	(1.82)
8. Tranquilizers	1	(3.3)	-	-	-	-	1	(3.3)	9	(30.0)	30	(3.90)
9. Barbiturates Sedatives/ Hypnotics	1	(5.9)	-	-	-	-	2	(11.8)	-	-	17	(2.21)

Table 8(i) EDUCATION

Drug	High School No (%)	Primary No (%)	Graduate No (%)	P.U.C. No (%)	Profe- ssional No (%)	P.G. No (%)	Middle School No (%)	Tech- nical No (%)	Illiterate No (%)
1. Total Drug users	107 (33.54)	20 (6.3)	85 (26.7)	17 (5.33)		48 (15.1)	26 (8.2)	9 (2.8)	6 (1.9)
2. Multiple Drug users	54 (33.13)	9 (5.5)	40 (24.5)	11 (6.7)		29 (17.8)	11 (6.7)	5 (3.1)	4 (2.5)
3. Cannabis	34 (36.2)	11 (11.7)	21 (22.3)	6 (6.4)		8 (8.5)	11 (11.7)	3 (3.2)	- -
4. Heroin	5 (31.3)	- -	6 (37.5)	- -	- -	2 (12.5)	2 (12.5)	- -	1 (6.3)
5. Opiates	4 (25.0)	- -	7 (43.8)	- -	- -	2 (12.5)	1 (6.3)	1 (6.3)	1 (6.3)
6. Amph.	1 (50.0)	- -	- -	- -	- -	1 (50.0)	- -	- -	- -
7. Opium	- -	- -	- -	- -	- -	- -	1 (100.0)	- -	- -
8. Tranq.	8 (34.8)	- -	8 (34.8)	- -	- -	7 (30.4)	- -	- -	- -
9. Barbiturates Sedatives/ Hypnotics	1 (25.0)	- -	3 (75.0)	- -	- -	- -	- -	- -	- -

TABLE 8(j) SHOWING NO. AND PERCENTAGES OF PERSONS ABUSING DIFFERENT TYPES OF DRUGS

Drug	No (%)
1. Poly drug users	356 (46.11)
2. Cannabis	211 (27.33)
3. Heroin	85 (11.0)
4. Opiates	54 (7.07)
5. Amphetamine	4 (0.52)
6. Opium	15 (1.94)
7. Tranquilizers	30 (3.89)
8. Barbiturates/Sedatives/Hypnotics	17 (2.20)

Table 8(k) AGE OF INITIATION

Drug	6-11 No (%)	12-17 No (%)	18-23 No (%)	24-29 No (%)	30-35 No (%)	36-41 No (%)	42-47 No (%)	48-53 No (%)	54-59 No (%)	60-65 No (%)	66-71 No (%)
1. Total Drug users	7 (0.9)	161 (20.85)	325 (42.1)	165 (21.37)	58 (7.51)	24 (3.11)	17 (2.2)	4 (0.52)	4 (0.52)	1 (0.13)	1 (0.13)
2. Multiple Drug users	5 (1.4)	92 (25.84)	158 (44.4)	67 (18.22)	21 (5.9)	6 (1.68)	4 (1.12)	1 (0.28)	-	1 (0.28)	-
3. Cannabis	1 (0.5)	41 (19.4)	81 (38.9)	48 (23.07)	20 (9.6)	8 (3.84)	6 (2.8)	1 (0.5)	1 (0.5)	-	-
4. Heroin	-	14 (16.5)	42 (49.4)	23 (27.1)	4 (4.7)	-	2 (2.4)	-	-	-	-
5. Opiates	1 (1.85)	9 (16.66)	23 (42.6)	8 (14.8)	6 (11.1)	3 (5.55)	3 (5.55)	-	1 (1.85)	-	-
6. Amph.	-	-	2 (50.0)	1 (25.0)	-	-	1 (25.0)	-	-	-	-
7. Opium	-	1 (6.7)	8 (53.3)	3 (20.0)	-	2 (13.3)	-	-	1 (6.7)	-	-
8. Tranq.	-	2 (6.7)	7 (23.3)	7 (23.3)	7 (23.3)	4 (13.3)	1 (3.3)	1 (3.3)	1 (3.3)	-	-
9. Barbiturates- Sedatives/ Hypnotics	-	2 (11.8)	4 (23.3)	8 (47.1)	-	1 (5.9)	-	1 (5.9)	-	-	1 (5.9)

Table 8(l) INITIATING FACTORS

Drug	To overcome pain No (%)	To overcome Depression No (%)	Frustration/ failure No (%)	Curiosity Exp. No (%)	Anxiety No (%)	Fly Probs No (%)	For Kicks No (%)	Friends No (%)	Rel. Practices No (%)
1. Total Drug users	11 (1.24)	93 (10.5)	42 (4.8)	118 (13.3)	20 (2.3)	76 (5.5)	54 (6.1)	440 (49.6)	3 (0.34)
2. Multiple Drug users	3 (0.72)	36 (8.7)	20 (4.7)	68 (16.5)	6 (1.5)	35 (8.5)	24 (5.8)	208 (50.6)	-
3. Cannabis	1 (0.42)	18 (7.5)	12 (5.0)	35 (14.6)	5 (2.1)	27 (11.3)	19 (8.0)	112 (46.9)	3 (1.3)
4. Heroin	-	8 (7.7)	2 (1.9)	10 (9.6)	2 (1.9)	6 (5.7)	4 (1.7)	70 (67.3)	-
5. Opiates	4 (6.6)	6 (9.8)	5 (8.2)	2 (3.3)	-	3 (4.9)	6 (9.8)	33 (54.0)	-
6. Amph.	-	1 (25.0)	-	-	1 (25.0)	-	-	1 (25.0)	-
7. Opium	1 (6.3)	3 (18.8)	-	1 (6.3)	-	2 (12.5)	-	9 (56.3)	-
8. Tranq.	1 (2.9)	15 (42.9)	1 (2.9)	2 (5.7)	5 (14.3)	2 (5.7)	1 (2.9)	5 (14.3)	-
9. Barb. Sedatives/ Hypnotics	1 (5.6)	6 (33.3)	2 (11.1)	-	2 (11.1)	-	-	2 (11.1)	-

INITIATING FACTORS (cont...) 8(l)

Drug	To increase sexual satisfaction No (%)	For Sleep lessness No (%)	Before exams No (%)	Abundance of money No (%)	To get through the day No (%)	To concen- trate on studies No (%)	Parental influence No (%)	To avoid WDS No (%)	As a substitute for alcohol No (%)
1. Total Drug users	1 (0.11)	19 (2.14)	2 (0.23)	1 (0.11)	1 (0.11)	2 (0.23)	2 (0.23)	2 (0.23)	1 (0.11)
2. Multiple Drug users	1 (0.24)	8 (1.9)	1 (0.24)	- -	- -	- -	- -	1 (0.24)	- -
3. Cannabis	- -	2 (0.8)	- -	- -	1 (0.4)	2 (0.8)	2 (0.8)	- -	- -
4. Heroin	- -	- -	- -	1 (1.0)	- -	- -	- -	1 (1.0)	- -
5. Opiates	- -	- -	- -	- -	- -	- -	- -	- -	- -
6. Amph.	- -	- -	1 (25.0)	- -	- -	- -	- -	- -	- -
7. Opium	- -	- -	- -	- -	- -	- -	- -	- -	- -
8. Tranq.	- -	2 (5.7)	- -	- -	- -	- -	- -	- -	1 (2.9)
9. Barb. Sedatives/ Hypnotics	- -	5 (27.8)	- -	- -	- -	- -	- -	- -	- -

Table 8(m)MAINTAINING FACTORS

Drug	To overcome Depression No (%)	To overcome pain No (%)	For Kicks No (%)	To overcome boredom No (%)	Failure/ frustra- tions No (%)	To inc. sexual potency No (%)	Influence of Hippies No (%)	To get through the day No (%)	Fly Probs No (%)	Sleep- lessness No (%)
1. Total Drug users	17 (11.6)	4 (2.7)	31 (21.2)	10 (6.8)	6 (4.1)	1 (0.7)	1 (0.7)	14 (9.6)	5 (3.4)	6 (4.1)
2. Multiple Drug users	11 (11.7)	4 (4.3)	16 (17.0)	10 (10.6)	3 (3.2)	1 (1.1)	1 (1.1)	14 (14.9)	2 (2.1)	4 (4.3)
3. Cannabis	2 (9.1)	- -	10 (45.5)	- -	3 (13.6)	- -	- -	- -	2 (9.1)	- -
4. Heroin	1 (12.5)	- -	2 (25.0)	- -	- -	- -	- -	- -	1 (12.5)	- -
5. Opiates	- -	- -	2 (18.2)	- -	- -	- -	- -	- -	- -	- -
6. Amph.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
7. Opium	- -	- -	1 (33.3)	- -	- -	- -	- -	- -	- -	- -
8. Tranq.	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 (50.0)
9. Barbs./ Sedatives/ Hypnotics	3 (75.0)	- -	- -	- -	- -	- -	- -	- -	- -	- -

MAINTAINING FACTORS 8(m) contd...

Drug	Friends		To outgrow assertive-ness		To relax		To avoid WDS		To avoid bad dreams		To achieve maximum output		Unemploy-ment		To feel mature		Escape from reality		Craving	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Total Drug users	7	(4.8)	9	(6.2)	2	(1.4)	8	(5.5)	1	(0.7)	1	(0.7)	2	(1.4)	1	(0.7)	1	(0.7)	3	(2.1)
2. Multiple Drug users	7	(7.4)	9	(9.6)	2	(2.1)	3	(3.2)	1	(1.1)	1	(1.1)	2	(2.1)	1	(1.1)	1	(1.1)	1	(1.1)
3. Cannabis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Heroin	-	-	-	-	-	-	3	(37.5)	-	-	-	-	-	-	-	-	-	-	-	-
5. Opiates	-	-	-	-	-	-	2	(18.2)	-	-	-	-	-	-	-	-	-	-	2	(18.2)
6. Amph.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Opium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Tranq.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Barb. Sedatives/ Hypnotics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Drug	To get medical help		To increase social con-fidence		Anxiety		To aesthetic awareness		To have good time with friends		To get a feeling of well being		To concen-trate on studies		Examination tensions	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Total Drug users	3	(2.1)	2	(1.4)	3	(2.1)	1	(0.7)	1	(0.7)	4	(2.7)	1	(0.7)	1	(0.7)
2. Multiple Drug users	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Cannabis	-	-	2	(9.1)	2	(9.1)	1	(4.5)	-	-	-	-	-	-	-	-
4. Heroin	-	-	-	-	-	-	-	-	1	(12.5)	-	-	-	-	-	-
5. Opiates	2	(18.2)	-	-	-	-	-	-	-	-	2	(18.2)	1	(9.1)	-	-
6. Amph.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Opium	1	(33.3)	-	-	-	-	-	-	-	-	1	(33.3)	-	-	-	-
8. Tranq.	-	-	-	-	1	(25.0)	-	-	-	-	-	-	-	-	1	(25.0)
9. Barb. Sedatives/ Hypnotics	-	-	-	-	1	(25.0)	-	-	-	-	1	(25.0)	-	-	-	-

Table 8 (n)SITE OF DRUG USE

Drug	School/ College No (%)	House No (%)	Streets No (%)	Park No (%)	Bars/ Pubs No (%)	Drug Den No (%)	Hospital Premises No (%)	Toilets No (%)	Hostel No (%)	Hotel/ Restaurant No (%)
1. Total Drug users	17 (13.4)	23 (18.1)	17 (13.4)	4 (3.1)	4 (3.1)	3 (2.4)	5 (3.9)	6 (4.7)	8 (6.3)	8 (6.3)
2. Multiple Drug users	11 (11.7)	19 (20.2)	12 (12.8)	3 (3.2)	4 (4.3)	2 (2.1)	5 (5.3)	4 (4.3)	6 (6.4)	6 (6.4)
3. Cannabis	5 (25.0)	2 (10.0)	2 (10.0)	1 (5.0)	-	-	-	-	2 (10.0)	1 (5.0)
4. Heroin	1 (9.1)	1 (9.1)	3 (27.3)	-	1 (9.1)	1 (9.1)	-	2 (18.2)	-	1 (9.1)
5. Opiates	-	1 (50.0)	-	-	-	-	-	-	-	-
6. Amph.										
7. Opium										
8. Tranq.										
9. Barbiturates Sedatives/ Hypnotics										

Drug	Work place No (%)	Bus-stop No (%)	Friend's residence No (%)	Theatres No (%)	Stadium No (%)	Cemetery No (%)	Pushers house No (%)	Parties No (%)	Paan shops No (%)	Isolated places No (%)	Arrack/ toddy shop No (%)
1. Total Drug users	1 (0.8)	3 (2.4)	9 (7.1)	4 (3.1)	5 (3.9)	1 (0.8)	1 (0.8)	2 (1.6)	1 (0.8)	2 (1.6)	3 (2.4)
2. Multiple Drug users	1 (1.1)	1 (1.1)	7 (7.4)	3 (3.2)	4 (4.3)	1 (1.1)	1 (1.1)	2 (2.1)	1 (1.1)	1 (1.1)	-
3. Cannabis	-	-	2 (10.0)	1 (5.0)	1 (5.0)	-	-	-	-	1 (5.0)	2 (10.0)
4. Heroin	-	-	-	-	-	-	-	-	-	-	1 (9.1)
5. Opiates	-	1 (50.0)	-	-	-	-	-	-	-	-	1 (9.1)
6. Amph.											
7. Opium											
8. Tranq.											
9. Barbiturates Sedatives/ Hypnotics											

Table 8 (o) LENGTH OF USAGE

Drug	Less than 5 No (%)	6-11 No (%)	12-17 No (%)	18-23 No (%)	24-29 No (%)	30-35 No (%)	36-41 No (%)	42-49 No (%)	48-53 No (%)
1. Total Drug users	511 (66.9)	195 (25.5)	46 (6.02)	9 (1.2)	1 (0.13)	-	-	1 (0.13)	1 (0.13)
2. Multiple Drug users	225 (63.4)	103 (29.0)	22 (6.2)	5 (1.4)	-	-	-	-	-
3. Cannabis	136 (65.7)	50 (24.2)	17 (8.2)	2 (0.96)	1 (0.5)	-	-	1 (0.05)	-
4. Heroin	62 (72.9)	20 (23.5)	2 (2.4)	1 (1.2)	-	-	-	-	-
5. Opiates	41 (75.9)	10 (18.5)	2 (3.7)	1 (1.9)	-	-	-	-	-
6. Amph.	3 (75.0)	-	1 (25.0)	-	-	-	-	-	-
7. Opium	8 (53.3)	6 (40.0)	1 (6.7)	-	-	-	-	-	-
8. Tran.	24 (88.9)	2 (7.4)	-	-	-	-	-	-	-
9. Barbs. Sedatives/ Hypnotics	12 (70.6)	4 (23.5)	1 (5.9)	-	-	-	-	-	-

Table 8 (p) PREVIOUS HOSPITALIZATION FOLLOW-UP

Drug	Yes No (%)	No No (%)	R.F. No (%)	Drop Out No (%)
1. Total Drug users	103 (34.6)	195 (65.4)	141 (57.9)	106 (43.0)
2. Multiple Drug users	55 (43.3)	72 (56.7)	73 (61.3)	46 (38.7)
3. Cannabis	24 (30.8)	54 (69.2)	35 (61.4)	22 (38.6)
4. Heroin	10 (22.2)	35 (77.8)	15 (39.5)	23 (60.5)
5. Opiates	6 (27.3)	17 (77.3)	12 (54.5)	10 (45.4)
6. Amph.	1 (100.0)	-	-	-
7. Opium	3 (25.0)	9 (75.0)	4 (100.0)	-
8. Tran.	1 (25.0)	3 (75.0)	1 (50.0)	1 (50.0)
9. Barbs. Sedatives/Hypnotics	3 (37.5)	5 (62.5)	5 (20.0)	4 (80.0)



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Table 9 SHOWING THE SIGNIFICANCE OF DIFFERENCE BETWEEN THE DIFFERENT VARIABLES

Sl. No	MD vs SDU OR	X ²	Cannabis Heroin X ²	Cannabis Opiates X ²	Cannabis Opium X ²	Cannabis Tranq. X ²	Cannabis Barbitu. X ²	Heroin Opiates X ²	Heroin Opium X ²							
1. Male/Female	1.10	0.05	2.58	1.34	0.00	0.31	0.00	0.09	41.20	72.17*	12.68	13.42**	0.00	1.72	0.00	0.10
2. Urban/Rural	0.69	0.67	-	5.41*	0.00	2.98	1.88	0.09	0.42	0.22	0.00	0.47	-	-	0.00	5.76*
3. Hindu/Muslim	1.29	0.69	4.87	11.11*	5.33	9.95*	2.84	0.50	1.14	0.17	0.00	0.25	1.10	0.01	0.58	0.07
4. Hindu/Christian	1.56	7.77*	1.55	2.07	1.30	0.34	0.52	0.48	0.21	6.30*	0.11	5.29*	0.84	0.07	0.34	1.72
5. Muslim/Christian	1.21	0.31	0.32	4.90*	0.24	5.98*	-	-	-	-	-	-	-	-	-	-
6. Married/Single	1.84	14.16*	2.02	5.04*	0.96	-	0.52	0.90	0.26	10.17**	0.77	0.05	0.47	3.05	0.26	4.47*
7. Prev.Hosp.Yes/No	0.51	6.82	1.56	0.66	1.11	0.01	1.33	-	-	-	0.74	-	0.71	0.01	0.86	0.03
8. Regular follow DO	0.71	1.38	2.44	3.56	1.33	0.09	-	-	-	-	-	-	0.54	0.74	-	-
9. Age < 23 and > 23	0.59	8.90*	1.54	1.23	1.53	0.70	1.81	0.20	2.51	1.59	2.09	0.45	0.99	0.05	1.17	0.04
10. Age < 34 and > 35	0.45	12.94**	0.2	8.34*	0.82	0.09	1.95	0.74	2.60	4.68*	1.20	-	3.35	3.43	8.00	7.84*
11. Age of Ini <23 & >23	0.54	15.82**	0.76	0.81	0.99	0.02	0.98	0.05	3.42	8.04*	2.68	2.82	1.31	6.31	1.29	0.02
12. Len.of usage	1.34	3.39	0.71	1.13	0.57	1.92	1.68	0.47	0.24	4.92*	0.80	0.02	0.81	0.10	2.36	1.49
13. Occ.Student/ Others	0.82	1.30	1.20	0.19	0.98	0.02	1.20	-	2.13	1.30	1.53	0.13	0.82	0.07	1.00	0.12
14. Unempl./Empl.	0.69	4.51*	0.81	0.28	1.01	0.03	1.63	0.08	1.76	0.60	4.34	1.47	1.24	0.09	2.00	0.29
15. Edu.School/Coll.	1.21	0.53	1.89	0.83	3.24	3.37	-	-	2.76	3.64	-	-	1.75	0.14	-	-
16. Graduate/PG's	1.01	0.04	2.33	0.11	0.88	0.22	-	-	4.67	3.12	-	-	0.33	0.05	-	-
17. Primary & Mid./HSC.	1.32	0.38	1.62	0.02	2.59	0.14	-	-	-	3.21	-	-	1.60	0.11	-	-
18. Total School/PUC	1.96	1.05	0.00	0.02	-	0.01	-	-	-	0.06	-	-	-	-	-	-
19. Socio-Eco.L/LM	1.19	0.00	0.22	0.74	-	-	-	-	-	-	-	-	-	-	-	-
20. L/U	2.79	3.47	5.14	4.26*	-	-	-	-	-	-	-	-	2.22	0.04	-	-
21. L/UM	2.31	1.61	0.75	0.01	-	-	2.08	0.18	-	-	-	-	-	-	-	-
22. UM/U	1.21	0.07	6.86	4.58*	2.29	0.42	-	1.83	-	-	-	-	0.33	0.71	-	-
23. M/UM	-	-	0.61	0.13	1.62	0.11	26.25	10.11**	-	-	0.00	0.09	2.67	0.60	43.33	11.17**
24. M/L	-	-	0.81	-	0.32	0.45	-	-	-	-	0.22	-	-	-	-	-
25. M/U	-	-	4.15	7.16*	3.69	3.64	-	-	-	-	-	-	-	-	-	-
26. M/LM	-	-	0.18	1.95	-	-	-	-	-	-	1.87	0.03	4.00	0.29	-	-
27.Place-Du.Col./Str.	1.65	0.08	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-

* 0.05 level of significance

** 0.01 level of significance

Table9contd.SHOWING THESIGNIFICANCE OF DIFFERENCE BETWEEN THE DIFFERENT VARIABLES (cont..)

Sl. No	Heroin Tranq. X ²		Heroin Barbi. X ²		Opiates Tranq. X ²		Opiates Barbi. X ²		Opium Tranq. X ²		Opium Barbi. X ²		Tranquil. Barbi. X ²		Opiates Opium X ²	
1. Male/Female	16.0	27.05	4.92	3.51	-	28.56	-	9.04	-	9.11	-	2.17	0.31	2.15	-	-
2. Urban/Rural	-	0.30							0.22	0.40	-	-	-	0.08	-	-
3. Hindu/Muslim	0.20	2.64	0.00	3.56	0.21	2.70	0.00	3.68	0.40	0.09	0.00	0.91	0.00	0.13	0.53	0.12
4. Hindu/Christian	0.13	10.01	0.07	8.19	0.16	6.81	0.08	5.98	0.40	0.32	0.21	0.69	0.52	0.00	0.40	0.91
5. Muslim/Christs.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Married/Single	-		0.38	2.03	0.27	6.36	0.80	0.11	0.49	0.59	1.47	0.03	3.0	2.02	0.55	0.54
7. Prev.Hosp.Yes/No-	-	-	0.48	0.23	-	-	0.67	0.00	-	-	0.56	0.01	-	-	1.20	0.03
8. Regular follow DO-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Age<23 and>23	1.63	0.17	1.35	-	1.64	0.12	1.36	-	1.38	0.03	1.15	0.16	0.83	0.09	1.18	0.05
10. Age<34 and>35	10.67	17.87	4.92	3.51	3.19	4.02	1.47	0.05	1.33	0.01	0.62	0.05	0.46	0.68	2.39	0.97
11. Age of Ini<23&>23	4.51	10.20	3.54	4.35	3.44	5.55	2.71	2.15	3.50	2.60	2.75	1.09	0.79	0.00	0.98	0.07
12. Len.of usage	0.34	2.10	1.12	0.01	0.42	0.97	1.39	0.04	0.14	4.90	0.48	0.41	3.33	1.28	2.92	2.13
13. Occ.Student/ Others	1.77	0.48	1.27	-	2.17	0.95	1.56	0.09	1.77	0.06	1.27	0.04	0.72	-	1.22	0.01
14. Unemp./Emp.	2.17	1.14	5.33	2.01	1.74	0.34	4.29	1.15	1.08	0.15	2.67	0.03	2.46	0.09	1.61	0.04
15. Edu.Sch/College	1.46	0.05	-	-	0.85	0.01	-	-	-	-	-	-	-	-	-	-
16. Graduate/PG's	2.00	0.07	-	-	6.00	1.40	-	-	-	-	-	-	-	-	-	-
17. Prim. & Mid./HSC-	0.74	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-	-
18. Total School/PUC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19. Socio-Eco.L/LM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20. L/U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21. L/UM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22. UM/U	-	10.20	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9*
23. M/UM	-	-	-	0.11	-	-	-	0.29	-	-	0.00	4.65*	-	-	16.25	4.38*
24. M/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25. M/U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26. M/LM	-	-	10.40	1.74	-	-	2.60	0.07	-	-	-	-	-	-	-	-
27.Place-Du.Col./Str.-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* 0.05 level of significance

* * 0.01 level of significance

TABLE 10. INTERVIEW WITH ADDICTS

NO. & % OF		NO. & % OF		NO. & % OF	
TOTAL SAMPLE		TOTAL SAMPLE		TOTAL SAMPLE	
a)					
1. AGE		7. EMPLOYMENT STATUS		13. NO. OF YRS STAYING IN THAT AREA	
15 - 19	4 (11,40)	Full time student	1 (2,90)	< 1 year	8 (22,90)
20 - 24	4 (11,40)	Part time student	0 (00,00)	1 - 4 yrs	4 (11,40)
25 - 29	12 (34,30)	Full time worker	24 (68,50)	5 - 8 yrs	0 (00,00)
30 - 34	9 (25,70)	Part time worker	1 (2,90)	9 - 12 yrs	1 (2,90)
35 - 39	4 (11,40)	Unemployed	9 (25,70)	13 - 16 yrs	1 (2,90)
40 - 44	1 (2,90)			17 - 20 yrs	0 (00,00)
45 - 49	1 (2,90)			21 - 24 yrs	3 (00,00)
2. SEX		8. NO. OF YEARS OCCUPATION		24 +	3 (8,50)
Male	35 (100,0)	< 1 year	2 (5,70)	Since birth	18 (51,40)
Female	0 (00,00)	1 - 5 yrs	10 (28,50)		
3. MARITAL STATUS		6 - 10 yrs	8 (22,90)	14.a. TYPE OF RESIDENCE	
Married	13 (37,10)	11 - 15 yrs	2 (5,70)	Owned	22 (62,90)
Single	22 (62,90)	16 - 20 yrs	1 (2,90)	Rented	13 (37,10)
4. RELIGION		Unemployed	9 (25,70)	b. Independ. house	29 (82,80)
Hindu	19 (54,30)	Not stated	2 (5,70)	Apartments	2 (5,70)
Muslim	1 (2,90)			Pucca hut	1 (2,90)
Christian	14 (40,00)	9. AREA		Row house	1 (2,90)
Jew	1 (2,90)	Urban	34 (97,10)	Not stated	2 (5,70)
5. EDUCATION		Rural	1 (2,90)		
Below SSLC	4 (11,40)	10. SCIO-ECO. STATUS		15. RESPONDENT LIVING WITH	
SSLC	9 (25,70)	Upper	15 (42,80)	Family	25 (71,40)
PUC	8 (22,90)	Middle	10 (28,60)	Relatives/ guardians	5 (15,30)
Graduate	6 (17,10)	Lower	10 (28,60)	In a hostel	1 (2,90)
Technical	7 (20,00)	11. EXTRA WAGE EARNER IN FLY		Rehabilitation centre	4 (11,40)
Postgraduate	1 (2,90)	Yes	25 (71,40)		
6. OCCUPATION		No	10 (28,40)	16. PARENTS ALIVE/DEAD	
Unemployed	9 (25,70)	12. AREA OF USUAL RESIDENCE		Father expired	7 (20,00)
Student	1 (2,90)	Metropolitan city	30 (85,70)	Mother expired	1 (2,90)
Unskilled Labour	5 (14,30)	Small Town	3 (8,50)	Both expired	0 (00,00)
Skilled Labour	5 (14,30)	City	1 (2,90)	Both alive	27 (77,10)
Clerical	1 (2,90)	Village	1 (2,90)		
Mangerial/ Prof. Job	6 (17,10)				
Business	8 (22,90)				

NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE
17. TYPE OF FLY Nuclear 30 (85,70) Joint 5 (14,30)	b. FAMILY BACKGROUND 1. FATHER'S OCCUPATION Business 12 (34,30) Managerial/ Professional 11 (31,40) Unskilled labour 4 (11,40) Skilled labour 5 (14,30) Clerical 2 (5,70) Military service 1 (2,90) 2. MOTHER'S OCCUPATION Business 4 (11,40) Managerial/ Profesional 2 (5,70) Household duty 23 (65,70) Unskilled labour 4 (11,40) Clerical 2 (5,70) 3. HABITS A. Father Smoke 19 (38,00) Drink 17 (34,00) Chew paan 0 (00,00) Take drugs 1 (2,00) None 13 (26,00) B. Mother Smoke 3 (7,90) Drink 5 (13,20) Take drugs 0 (00,00) None 28 (73,70) Chew paan 2 (5,30) C. Brother Smoke 10 (28,60) Drink 6 (17,10) Take drugs 3 (8,60) None 14 (45,70) D. Sister Smoke 0 (00,00) Drink 1 (2,90) Take drugs 0 (00,00) None 34 (97,10)	4. PARENTS RELATIONSHIP Harmonious 24 (68,60) Hostile 4 (11,40) Indifferent 7 (20,00) 5. INTERRPERSONAL RELATIONSHIP WITH RESPONDENT Harmonious 24 (68,60) Hostile 4 (11,40) Indifferent 7 (20,00) 6. RELATIONSHIP WITH SIBLINGS Harmonious 28 (80,00) Hostile 0 (00,00) Indifferent 7 (20,00) 7. SHOW. INTEREST Father Yes 26 (74,30) No 9 (25,70) Mother Yes 31 (88,60) No 4 (11,40) 8. WAYS OF DISCIPLINING Father Strict 18 (51,40) Moderate 5 (14,30) Lenient 12 (34,30) Mother Strict 13 (37,10) Moderate 12 (34,30) Lenient 10 (28,86)
18. TOTAL NO. OF FAMILY MEMBERS 0 - 2 5 (14,30) 3 - 4 12 (34,30) 5 - 6 8 (22,90) 7 - 8 3 (8,50) 9 - 10 3 (8,50) 11 - 12 0 (00,00) 12 + 4 (11,40)		
19. a. TYPE OF SCHOOL Government 9 (25,70) Private 26 (74,30)		
19. b. MEDIUM OF INSTRUCTION English 28 (80,00) Kannada 2 (5,70) Tamil 5 (14,30)		
20. COURSE OF STUDY Arts 4 (11,40) Science 12 (34,30) Commerce 7 (20,00) None 12 (34,30)		

NO. & % OF TOTAL SAMPLE	
9. USUAL METHOD OF CONTROLLING	
Scolding	23 (32,10)
Beating	18 (21,40)
Discussion	3 (3,60)
Advicing	21 (25,00)
Encouraging	8 (9,50)
Ignoring	2 (2,40)
Criticizing	4 (4,80)
Did not care	1 (1,20)
10. TAKING PARENTS INTO CONFIDENCE	
Yes	15 (42,90)
No	20 (57,10)
11. RELATIVES STAY IN TOUCH WITH	
1 - 2	4 (11,40)
3 - 4	10 (28,60)
5 - 6	3 (8,60)
7 - 8	2 (5,70)
11 - 12	3 (8,60)
12 +	3 (8,60)
Can't say	4 (11,40)
None	6 (17,10)
12. SPENDING TIME WITH FLY MEMBERS	
Get along together	21 (39,60)
Enjoyed being together	12 (22,60)
Talked openly	3 (5,70)
Argued	3 (5,70)
Helped each other	1 (1,90)
Had disagreement	13 (24,50)

NO. & % OF TOTAL SAMPLE	
13. a. PARENTS BEING AWARE OF DRUG HABITS	
Yes	29 (74,30)
No	6 (25,70)
13. b. THEIR REACTIONS	
Gave their support	3 (7,00)
Tried to get them off	11 (25,00)
Get angry	15 (34,90)
Shocked	6 (14,00)
Stopped pocket money	5 (11,60)
Indifferent	3 (7,00)
14. REASONS FOR KEEPING THE HABIT A SECRET	
a. Respected them	2 (5,00)
b. Thought that the pocket money would be stopped	4 (10,00)
c. Might create a fuss in the family	7 (17,50)
d. They would feel miserable and hurt	12 (30,00)
e. Felt quitly about prob	4 (10,00)
f. Did not care for them	1 (2,50)
g. It would interfere with other siblings	2 (5,00)
h. Was scared that they would hand him over to police	1 (2,50)
i. Would be prevented from moving with friends	1 (2,50)
j. Because of communication gap	1 (2,50)
k. Withdrawal from school/college	1 (2,50)
l. Would be stopped from going to certain places	1 (2,50)
m. Not stated	3 (7,50)

NO. & % OF TOTAL SAMPLE	
C. LEISURE TIME ACTIVITIES	
1. HOBBIES/ LEISURE TIME ACTIVITIES	
a. Reading	17 (23,60)
b. Watching movies	11 (15,30)
c. Watching TV	6 (8,30)
d. Listening to music playing an instrument	16 (22,20)
e. Sports	9 (12,50)
f. Others	12 (16,70)
g. None	1 (1,40)
2. EXPENDITURE FOR SUCH ACTIVITIES	
10 - 50	10 (28,50)
60 - 100	2 (5,70)
100 - 150	1 (2,90)
151 - 200	3 (8,50)
201 - 250	1 (2,90)
251 - 300	1 (2,90)
300 & above	4 (11,40)
Can't say	8 (22,90)
None	5 (14,30)
3. SOURCE OF EXPENDITURE	
Parents	18 (51,40)
Self earn	8 (22,90)
Peddle drugs	1 (2,90)
None	8 (22,90)
d. RELIGIOUS BACK GROUND	
1. FAMILIES HAVING RELIGIOUS AFFILIATION	
Yes	35 (100,00)
No	0 (00,00)

d. RELIGIOUS BACK GROUND
contd...

NO. & % OF TOTAL SAMPLE		
2. HOW OFTEN WERE RELIGIOUS SERV. ATTENDED		
Daily	2	(5,70)
Weekly	10	(28,60)
Monthly	4	(11,40)
On festivals	4	(11,40)
Very rarely	1	(2,90)
Never	4	(11,40)
Can't say	10	(28,60)
3. OBSERVING RELIGIOUS PRACTICES		
Yes	7	(20,00)
No	28	(80,00)
e. SCHOLASTIC BACKGROUND		
1. ACADEMIC PERFORMANCE		
Distinction	3	(8,50)
1st class	14	(40,00)
Pass	14	(40,00)
Fail	4	(11,40)
2. CO-CURRICULAR ACTIVITIES		
Debates	11	(25,00)
Essay competition	10	(22,70)
Gen. knowledge Competitions	1	(2,30)
None	22	(50,00)
3. EXTRA CURRICUALR ACTIVITIES		
N.C.C.	10	(19,60)
N.S.S.	1	(2,00)
Dramatics	5	(9,80)
Sports	26	(51,00)
Games	4	(7,80)
None	5	(9,80)

f. PEER RELATIONS

NO. & % OF TOTAL SAMPLE	
1. NO. OF FRIENDS	
1 - 3	7 (10,00)
4 - 6	11 (15,70)
7 - 9	3 (4,30)
10 & above	25 (35,70)
None	24 (34,30)
2. DATING HABITS	
Yes	20 (57,10)
No	15 (42,90)
3. WISH TO HAVE MORE FRIENDS	
Yes	5 (14,30)
No	30 (85,70)
4. USE OF DRUGS BY FRIENDS	
a. Use drugs	57 (79,20)
b. Sell drugs	12 (16,70)
c. None	3 (4,10)
5. AMOUNT OF TIME SPENT WITH DRUG USING FREINDS	
Less than half	6 (17,10)
About half	10 (28,60)
Almost all	18 (51,40)
None	1 (2,90)
6. NO. OF HOURS A WEEK SPENT WITH DRUG USING FRDS	
1 - 2	1 (2,90)
3 - 4	6 (17,10)
5 - 6	5 (14,30)
7 - 8	8 (22,90)
9 - 10	2 (5,70)
11 & above	9 (25,70)
Can't say	4 (11,40)

NO. & % OF TOTAL SAMPLE	
7. FREQUENCY OF MEETING DRUG USING FREINDS	
Almost daily	27 (77,00)
2 - 5 times/ week	0 (00,00)
About 1 a week	2 (5,70)
2 - 3 times/ mnth	1 (2,90)
Once a mnth/less	1 (2,90)
Never	4 (11,40)
8. USUAL MEETING PLACE WITH DRUG USING FREINDS	
College	3 (4,90)
Work place	2 (3,30)
Social clubs	4 (6,60)
Private practice	7 (11,30)
Bars/pubs	10 (16,40)
Streets	6 (9,80)
Parks	9 (14,80)
Bus stop	4 (6,60)
Home	7 (11,30)
Public toilets	2 (3,30)
Hostel	1 (1,60)
Cemetery	1 (1,60)
Athletic & Recre ational setting	1 (1,60)
Any places	2 (3,30)
Other places	2 (3,30)
9. TIME OF THE DAY FOR MEETING DRUG USING FRIENDS	
Any time of day	16 (45,70)
Usually in the morning	3 (8,60)
Usually in the afternoon	2 (5,70)

NO. & % OF TOTAL SAMPLE	
Usually in the evening	10 (28,60)
Usually at night	0 (00,00)
All day long	4 (11,40)
10. REASONS FOR MEETING FREINDS	
Take drugs together in a group	21 (47,70)
Exchange information about drugs	10 (22,70)
Plan social event	3 (6,80)
By virtue of working at the same place	2 (4,50)
Go for movies	3 (6,80)
When need money	1 (2,30)
None	2 (4,50)
Not applicable	2 (4,50)

g. DRUG HISTORY	
NO. & % OF TOTAL SAMPLE	
1. MOST COMMON REASONS FOR USING MORE THAN ONE DRUG	
1 drug did not give desired effect	8 (47,10)
Curiosity	7 (41,20)
Easy available	1 (5,90)
Not stated	1 (5,90)
2. PRIMARY DRUG ABUSED	
Brown sugar	14 (40,00)
Cannabis	8 (22,80)
Opiates	10 (28,60)
Cocaine	1 (2,90)
Barbituates/sedatives/Hypnotics	3 (8,60)
3. METHODS OF USING DRUGS	
Smoking	26 (26,50)
Sniffing (chase, inhaling)	26 (26,50)
Injecting	21 (21,40)
Swallowing (eat, chew, drink)	25 (25,50)
5. USE OF NEEDLE FOR ADMINISTERING DRUGS	
Yes	20 (57,10)
No	14 (40,00)
Not stated	1 (2,90)
6. USE OF NEEDLE USED BY OTHERS	
Yes	8 (22,80)
No	26 (74,30)
Not stated	1 (2,90)
7. AWARE OF CONTACT OF AIDS BY SHARING NEEDLES	
Yes	30 (85,70)
No	3 (8,60)
Not stated	2 (5,70)

NO. & % OF TOTAL SAMPLE	
8. AGE-KNOWLEDGE OF DRUGS	
10 - 14	18 (51,40)
15 - 19	13 (37,10)
20 - 24	3 (8,60)
30 - 34	1 (2,90)
9. SOURCE OF INFORMATION ABOUT DRUGS	
Friends	24 (68,60)
Co-worker	2 (5,70)
Media	5 (14,30)
Foreigners	1 (2,90)
Brother	3 (8,60)
10. AGE OF FIRST USE	
10 - 14	5 (14,30)
15 - 19	19 (54,30)
20 - 24	7 (00,00)
25 - 29	3 (8,50)
30 - 34	1 (2,90)
11. PERSON WITH WHOM USED FIRST	
Alone	5 (14,30)
Friends	25 (71,40)
Acquaintances	3 (8,60)
Co-worker	2 (5,70)
12. METHODS OF OBTAINING DRUGS	
Obtained as gift	
First	28 (80,00)
Usual	00(00,00)
Bought from peddler or friend	
First	5 (14,30)
Usual	47 (77,00)
Bought from a Hospital/Nurse	
First	1 (2,90)
Usual	1 (1,60)
Bought from a Hippie	
First	0 (00,00)
Usual	2 (2,30)

NO. & % OF
TOTAL SAMPLE

**Respondants own
Prescription**

First 0 (00,00)
Usual 1 (1,60)

From a forged Prescription

First 0 (00,00)
Usual 1 (1,60)

Stole the drug

First 1 (00,00)
Usual 0 (00,00)

Bought from a chemist

First 0 (00,00)
Usual 6 (9,80)

From a personal physician

First 0 (00,00)
Usual 2 (3,30)

**13. REASON FOR THE
FIRST USE OF DRUG**

Curiosity 28 (80,00)

Sociability 1 (2,90)

Relief from 3 (8,60)
Stress

Relief from 1 (2,90)
physical plan

Force of friends 2 (5,70)

14. SITE OF FIRST USE

Home 1 (2,90)

School/ College 7 (20,00)

Place of work 1 (2,90)

Friends 3 (8,60)
residence

Bar/Pub/
Restaurant 7 (20,00)

Street 4 (11,40)

Park 4 (11,40)

Bus-stop 1 (2,90)

Drug den 1 (2,90)

Chemist shop 1 (2,90)

Hostel 4 (11,40)

Hospital 1 (2,90)

NO. & % OF
TOTAL SAMPLE

**15. HAVING KNOW-
LEDGE ABOUT DRUG
CREATING ADDICTION**

Yes 14 (40,00)

No 21 (60,00)

**16. REASONS
FOR CONTINUATION**

Overcome 1 (4,50)
boredom

Relief from 2 (9,10)
pain

Experience the 12 (54,60)
effect of drug

Craving 1 (4,50)

Was confident of 6 (27,20)
not getting addict

**17. PARENTS USE OF
DRUG WHEN RESPON-
DENT STARTED USING**

Yes 0 (00,00)

No 35 (100,0)

**18. SIBBLINGS USING
DRUGS**

Yes 5 (14,30)

No 30 (85,30)

**19. FREINDS USING
DRUGS**

Yes 28 (80,00)

No 7 (20,00)

**20. AGE OF REGULAR
USE**

10 - 14 3 (3,50)

15 - 19 14 (40,00)

20 - 24 12 (34,30)

25 - 29 5 (14,30)

30 - 34 1 (2,90)

NO. & % OF
TOTAL SAMPLE

**21. TIME OF DRUG
USE**

Anytime of day 15 (31,90)

Almost the whole 6 (12,80)
day

Morning 8 (17,00)

After work 4 (8,50)

Before going to 2 (4,30)
bed

Evenings 5 (10,60)

**22. USE OF DRUGS
BEEN CHANGED**

Yes 22 (62,90)

No 5 (14,30)

Not stated 8 (22,80)

h.CAUSES OF DRUG USE

1. Craving 21 (11,70)

Friends influence 26 (14,40)

To have a good time 32 (16,20)
with friends

To get a kick 31 (17,20)

To get through 20 (11,10)
the day

To cope with psycho 12 (6,70)
logical strain

Health problems 4 (2,20)

To reduce mental 8 (4,40)
tensions

Abundance of 7 (3,90)
money

Economic 8 (4,40)
hardship

To enhance social 11 (6,10)
confidence

**2. IS HEALTH IN ANY
WAY RESPONSIBLE
FOR FORMING HABIT**

Yes 9 (25,70)

No 26 (74,30)

NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE
3. PSYCHOLOGICAL TENSIONS RESPONSIBLE FOR FORMING DRUG HABIT Yes 8 (22,80) No 26 (74,30) Not stated 1 (2,90)	8. PARTICULAR TASKS UNDER INFLUENCE OF DRUG Work better 5 (13,50) Increases creativity 3 (8,10) Singing 2 (5,40) Speak confidently 2 (5,40) None 17 (45,90)	3. contd... Stealing 9 (12,70) Gambling 7 (9,90) Easy schemes of money 3 (4,20) Horse racing 3 (4,20) Not stated 10 (14,10)
4. IS ECONOMIC CONDITION RESPONSIBLE FOR FORMING THE DRUG HABIT Yes 6 (17,10) No 28 (80,00) Not started 1 (2,90)	i. ECONOMIC ASPECTS OF DRUG USE 1. MONTHLY EXPENDITURE ON DRUGS 50 - 100 2 (5,70) 101 - 500 4 (11,40) 501 - 1000 8 (22,80) 1001 - 1500 3 (8,50) 1600 - 2000 2 (5,70) 2100 - 2500 1 (2,90) 2600 - 3000 3 (8,60) 3600 - 4000 1 (2,90) 4100 - 5000 2 (5,70) 5000 & above 6 (17,10) 60,000 1 (2,90)	4. DRUG USE IS HARMFUL OR NOT Harmful 26 (74,30) Very harmful 6 (17,10) Not harmful 3 (8,60)
5. DRUG USE REDUCING MENTAL TENSION Yes 11 (31,40) No 21 (60,00) Not started 3 (8,60)	2. CHANGING THE AMOUNT OR TYPE DRUGS IF HAD MORE MONEY Yes 9 (25,70) No 26 (74,30)	5. PROBLEMS RESULTING FROM DRUG USE Affecting health 22 (42,20) Psychological effects 14 (26,90) Sociological 7 (13,50) Economic 8 (15,40) Sexual 1 (1,90)
6. ACTIVITIES INDULGED IN AFTER DRUG USE Listen to music 13 (21,30) Stay alone 7 (11,50) Work efficiently 3 (4,90) Stay with friends 11 (18,00) Become hyper active 2 (3,30) Everything is done after taking drug 4 (6,60) Singing 2 (3,30)	3. SOURCE OF EXPENDITURE ON DRUGS Borrowing money 22 (31,00) Personal income 13 (18,30) Peddling drugs 4 (5,60)	6. PERSONAL PROBLEM Physical health 44 (15,60) Mental health 53 (18,80) Occupation 32 (11,30) Economic aspects 45 (15,90) Family relations 29 (10,30) Social relations 65 (23,00) Sexual life 9 (3,20) Nothing 5 (1,80)
7. DRUG TAKEN AFTER GIVING UP ALCOHOL Yes 3 (8,60) No 29 (82,80) Not started 3 (8,60)		7. DRUG HABIT AFFECTING PHYSICAL HEALTH Collapsed veins 9 (20,50) Abscesses 4 (9,10) Epileptical attacks 3 (6,80) Hepatitis 3 (6,80)

NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE
3. contd...	13. SELF-REPORTED CRIMINAL ACTS BY USE OF DRUGS	17. TAKING AN OVER DOSE
General weakness 4 (9,10)	Illegal gambling 7 (11,50)	Yes 16 (45.70)
None 20 (45,50)	Stealing 9 (14,80)	No 17 (48.70)
8. IMPACT ON MENTAL HEALTH	Drug peddling 4 (6,60)	Not Stated 2 (5.70)
Poor memory 17 (37,80)	Lottery tickets 1 (1,60)	18. TRYING TO COMMIT SUICIDE BECAUSE OF HABIT
Poor communication 17 (37,80)	Schemes of easy money 3 (4,90)	Yes 7 (20.00)
None 9 (20,00)	Horse racing 2 (3,30)	No 25 (71.40)
Not stated 2 (4,40)	Forged prescriptions 1 (1,60)	Not stated 3 (8.60)
9. SOCIAL RELATIONS	Driving while intoxicated 18 (29,50)	
Less communication 20 (83,40)	Arrested/warned charged crime 16 (26,20)	J. EFFECT OF DRUG USE
Fights at home 35 (12,20)	Arrested/warned for possession of drugs 20 (32,80)	1. PSYCHOLOGICAL EFFECTS
Lost friends 11 (26,80)		Increased Confidence 8 (12.10)
Shunned acquainta- nces 6 (14,60)		Pleasant feeling 16 (24.20)
None 13 (31,70)		Feeling of Excitement 9 (13.60)
10. EFFECT ON WORKING CAPACITY	14. PERCEPTION OF OVERALL EFFECT DRUG USAGE HAD ON THEIR LIVES	Hyperactive 7 (10.60)
Increased absenteeise 17 (36,20)	Very bad/Bad 58 (82.90)	Visual Hallucination 7 (10.60)
Losing their jobs 5 (10,60)	Very good/Good 5 (7.10)	Depression 4 (6.70)
Lack of interest 5 (10,60)	Has no effect 4 (5.70)	
None 27 (27,60)	Not stated 3 (4.30)	2. PSYCHOLOGICAL EFFECTS
11. EFFECT ON ECONOMIC CONDITION	15. TELLING LIES TO HIDE HABIT	Excessive sleep 32 (48.40)
Incur debts 11 (20,70)	Yes 30 (85.70)	Very energetic 5 (7.60)
Mortgaging property 8 (15,10)	No 5 (14.30)	Giggling 5 (7.60)
Selling property 7 (13,20)		Loss of weight 3 (4.50)
Selling household articles/ vehicles 12 (22,60)	16. BEING ASHAMED OF HABIT	Excssive Talking 3 (4.50)
None 15 (28,30)	Yes 28 (80.00)	
12. SEXUAL PROBLEMS	No 5 (14.30)	
Discreased libido 7 (20,00)	Not Stated 2 (5.70)	
Retarted ejaculation 1 (2,90)		
Impotency 1 (2,90)		
None 6 (17,00)		

NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE
3. EXPERIENCES WHEN THE DRUGS ARE NOT TAKEN	2. EFFORTS TO GIVE UP THIS HABIT	6. REASONS FOR FAILURE TO KEEP OFF DRUGS
Irritation 7 (11.10)	Yes 22 (62.90)	Withdrawal symptoms 11 (31,40)
Craving 6 (9.50)	No 13 (37.10)	Lacked strong will power 9 (25,70)
Withdrawal symptoms 17 (27.00)	Self effort 12 (29.30)	Lack of support from family 4 (11,40)
Bored 4 (6.30)	De-addiction camp 5 (12.20)	Craving 4 (11,40)
Feeling of Emptiness 4 (6.30)	Guidance from religious leaders 3 (7.30)	Friends influnces 2 (5,70)
Depression 4 (6.30)		
4. THINGS DONE AFTER THE EFFECT OF DRUG HAS WORN OFF	Avoiding friends who used drugs 3 (7.30)	7. FACTORS ENABLE TO REMAIN IN A DRUG FREE STATE
Take more drugs 18 (38.30)	Swearing before family menmbers 2 (4.90)	Self understanding 4 (8,90)
Feel guilty 10 (21.30)		Nonavailability 3 (6,70)
Resolve not to take it again 12 (25.50)	3. USING INDEGENIOUS SYSTEMS OF MEDICINES	Bad experince with drug 2 (4,40)
	Yes 1 (2.90)	Parental pressure 4 (8,90)
5. DURATION OF TOLERANCE	No 32 (91.40)	Because of treatment 2 (4,40)
1 - 2 Hours 4 (11.40)	Not stated 2 (5.70)	Change of city with family 5 (11,10)
3 - 4 Hours 8 (22.90)	NO. & % OF TOTAL SAMPLE	Changing whole way of living 1 (2,20)
5 - 6 Hours 2 (5.70)		
1 - 2 days 5 (14.30)	4. GIVING UP DRUG IS	8. DIFFICULTATIES FACED WHILE GIVING UP PRACTICE
3 - 4 Days 6 (17.10)	Easy 13 (37,10)	No control over craving 9 (19,60)
	Difficult 3 (8,60)	Withdrawal state 8 (17,40)
k. DRUG TREATMENT HISTORY	Little difficult 2 (5,70)	Agony / unhappiness 8 (17,40)
1. MOTIVATION TO GIVE UP THE HABIT	Very difficult 17 (48,60)	
Self 15 (35.70)	5. DURATION OF DRUG FREE STATE	9. LAST TREATMENT
Parents / family 14 (33.30)	1 - 15 days 11 (31,40)	< than a year 5 (14,30)
Friends 6 (14.30)	1 - 4 months 7 (20,00)	1 - 5 years 9 (25,70)
Social workers 2 (4.80)	1 - 4 years 8 (22,90)	6 - 10 years 4 (11,40)
Spouse 5 (11.90)	15 - 20 years 1 (2,90)	1 - 3 months 1 (2,90)
	Friends influnces 2 (5,70)	

NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE	NO. & % OF TOTAL SAMPLE
10. FACTORS WHICH HELP THEM IN KEEPING OFF DRUGS Families support and self control 5 (12,50) Avoiding friends using drugs 3 (7,50) Getting involved in sports 3 (7,50) Strong determination 5 (12,50) Strong belief in God 2 (5,00) Love & understanding from pepole 2 (5,00) Changing the whole life style 3 (7,50) Regular conselling 2 (5,00)	3. AREAS IN NEED OF HELP Finding a job 2 (18,20) Improve family relations 4 (36,40) None 19 (54,30) 4. MOST VALUABLE SERVICE TO BE OFFERED TO KEEP OFF DRUGS Need for athletic & recreational activity 6 (17,10) Improvement of family life 5 (14,30) Having regular/whole time job 7 (20,00) 5. GIVEN ANOTHER CHANCE HOW THEY WOULD HAVE KEEP OF DRUGS Never touch drugs again 13 (31,70) Have good friends 4 (9,80) Will be very careful about drugs 6 (14,60)	4. PROBLEM OF DRUG USE COULD BE COMBATED OR NOT Yes 23 (65,70) No 10 (28,60) Not stated 2 (5,70) 5. METHODS WHICH COULD BE ADOPTED TO COMBAT THIS PROBLEM Educating youth 9 (32,10) Strict policing 5 (17,90) Banning the sale 2 (5,70) 6. DRUG USE TO BE LEGALISED Yes 9 (25,70) No 24 (68,60) Not stated 2 (5,70) 7. POSSESSION OF DRUGS SHOULD BE CONTROLLED/ NOT Yes 10 (28,60) No 22 (62,90) Not stated 3 (8,50)
11. POSSSIBILITY OF USING DRUG 2 YEARS FROM NOW Yes 5 (14,30) No 24 (68,60) Not sure 6 (17,10)	TABLE NO. XIII - OPINION & SUGGESTION 1. SPEED OF DRUG USE IN RECENT YEARS Increased 29 (82,80) Decreased 1 (2,90) No change 5 (14,30) 2. POPULATION IN WHICH DRUG USE IS MORE Students 27 (55,10) Slum dwellers 6 (12,20) Labourers 6 (12,20) Rag pickers 3 (6,10)	8. COLLEGE OFFICIAL TO REPORT TO LEGAL AUTHORITIES Yes 28 (80,00) No 7 (20,00) 9. ISSUING CLEAR POLICY ABOUT DRUG USE IN THE CAMPUS Yes 31 (88,60) No 2 (5,70) Not stated 2 (5,70) 10. EDUCATION AS A MEANS TO COMBAT THE PROBLEM Good 27 (77,10) Has no effect 5 (14,30) Not stated 3 (8,60)
12. CURRENTLY RECEIVING TREATMENT FOR DRUG USE Yes 14 (40,00) No 17 (48,60) Not stated 4 (11,40)	1. TREATMENT THAT HELPED THE ADDICTS Detoxification 8 (61,50) Regular counselling 1 (7,70) Treatment for withdrawal symptoms 1 (7,70) Rehabilitation 1 (7,70)	11. EDUCATING PARENTS REGARDING THE PROBLEMS OF ADOLESCENTS Helpful 25 (71,40) Not helpful 7 (20,00) Not stated 3 (8,60)
2. INVOLVMENT OF THE FAMILY IN TREATMENT Yes 23 (65,70) No 10 (28,60) Not stated 2 (5,70)	3. DRUGS ARE EASILY AVAILABLE IN BANGALORE Yes 30 (85,70) No 3 (8,60) Not stated 2 (5,70)	

Table 11 SHOWING THE CATEGORIES OF DRUG USED

No. in each "Category"	Percent in each "Category"	
6	17.1	Cannabis, Heroin
9	25.7	Alcohol, Cannabis, Heroin
3	8.6	Alcohol, Cannabis, Opiates, Heroin
3	8.6	Alcohol, Cannabis, Opiates, Tranquilizers, Heroin
3	8.6	Alcohol, Cannabis, Opiates, Tranquilizers, Barbiturates, Heroin
5	14.3	Alcohol, Cannabis, Opiates, Tranquilizers, Barbiturates, Amphetamines, Heroin
1	2.9	Alcohol, Cannabis, Opiates, Tranquilizers, Barbiturates, Amphetamines, Cocaine, Heroin
1	2.9	Alcohol, Cannabis, Opiates, Tranquilizers, Barbiturates, Amphetamines, Cocaine, Opium, Heroin
2	5.7	Cannabis, Opiates, Tranquilizers, Heroin
2	5.7	Alcohol, Cannabis, Mandrax, inhalants

TABLE 12: SHOWING SOCIO DEMOGRAPHIC DETAILS OF THE INFORMED PERSONS OF RURAL AREA.

Occupation		No (%)	Age		No (%)
House wife		5 (12.5)	25-29		2 (5.0)
Labourers		7 (17.5)	30-34		4 (10.0)
Weavers		9 (22.5)	35-39		3 (7.5)
Business		4 (10.0)	40-44		5 (12.5)
Journalist		1 (2.5)	45-49		4 (10.0)
Teacher		1 (2.5)	50-54		8 (20.0)
Block Health Educator		1 (2.5)	55-59		7 (17.5)
Health Assistant		1 (2.5)	60-64		6 (15.0)
Village Leader		1 (2.5)	70-74		1 (2.5)
Bank Officer		1 (2.5)	40		
Farmers		7 (17.5)	Sex		
Temple Priest		1 (2.5)	Male		33 (82.5)
Unemployed		1 (2.5)	Female		7 (17.5)
		40			40

Length of Residence in the Village		No (%)	Education		No (%)
1 - 5 years		1 (2.5)	Illiterate		13 (32.5)
5 - 10 years		0 (0.0)	Primary		11 (27.5)
10 - 15 years		2 (5.0)	Secondary		5 (12.5)
Above 20 years		5 (12.5)	Higher Sec.		7 (17.5)
Since birth		32 (80.0)	Under grad.		4 (10.0)
		40			40

Religion		No (%)
Hindus		40 (100.0)
Muslims		- -
Christians		- -

TABLE 13: SHOWING THE CATEGORIES OF INFORMED PERSON OF URBAN AREA.

		No			No (%)
<u>Categories of Informed Persons</u>			<u>Age</u>		
1. Psychiatrists	20		20-25	18	(13.33)
2. Principals & Teachers	15		26-30	18	(13.33)
3. Social Workers	14		31-33	22	(16.30)
4. Counsellors	12		36-40	21	(15.56)
5. Factory Employees	12		41-45	19	(14.07)
6. General Practitioners	9		46-50	13	(9.65)
7. Students	9		51-55	8	(5.93)
8. Pharmacists	7		56-60	9	(6.67)
9. Law enforcement personnel	15		61-65	4	(2.96)
10. Media personnel/ Artists	7		66-70	2	(1.48)
11. Personnel Officers	5		70 +	1	(0.74)
12. Religious Leaders	4		<u>135</u>		
			<u>Sex</u>		
13. Hostel Wardens	3		Male	89	(65.93)
14. Indegenious Practitioners	3		Female	46	(34.07)

	135				

COMMUNITY SURVEY

TABLE 14 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE TOTAL SAMPLE

Rural						Slum						Urban											
NO. (%)						NO. (%)						NO. (%)											
Age												Marital Status											
10-14						47 (4.88) 26 (10.21) 9 (4.9)						Married 823 (85.53) 171 (67.30) 117 (63.90)											
15-19						68 (7.06) 27 (10.60) 20 (11.0)						Single 132 (13.71) 78 (30.71) 58 (31.70)											
20-24						97 (10.07) 36 (14.20) 27 (14.8)						Widowed 8 (0.83) 2 (0.79) 5 (2.73)											
25-29						88 (9.14) 35 (13.80) 19 (10.4)						Separated -- -- 3 (1.90) 3 (1.64)											
30-34						85 (8.80) 18 (7.10) 18 (10.0)																	
35-39						79 (8.20) 22 (8.70) 15 (8.2)						Religion											
40-44						93 (9.70) 24 (9.40) 16 (8.8)						Hindu 923 (95.85) 221 (87.00) 46 (25.14)											
45-49						82 (8.50) 14 (5.50) 13 (7.1)						Muslim 38 (3.95) 11 (4.33) 69 (37.70)											
50-54						98 (10.18) 17 (6.7) 11 (6.0)						Christian -- -- 16 (6.30) 55 (30.05)											
55-59						89 (9.24) 12 (4.7) 9 (4.9)						Jain 2 (0.21) -- -- 4 (2.19)											
60-64						67 (6.96) 11 (4.30) 12 (6.6)						Parsee -- -- -- -- 2 (1.09)											
65-69						37 (3.84) 7 (2.80) 6 (3.3)						Not known -- -- 6 (2.36) 7 (3.83)											
70-74						19 (1.97) 4 (1.60) 4 (2.2)																	
75-79						12 (1.25) 1 (0.40) 2 (1.1)						Education											
80 & above						2 (0.21) - -- 1 (0.5)						Illiterate 432 (44.86) 117 (46.06) 18 (9.84)											
Total						963 254 182						Primary 289 (30.00) 95 (37.40) 21 (11.48)											
Mean age						47.8 44.1 45.8						Higher Sec. 191 (19.83) 32 (12.69) 52 (28.42)											
Sex												Under grad. 43 (4.46) 7 (2.76) 47 (25.68)											
Male						554 (57.53) 129 (50.79) 94 (51.37)						Graduate 8 (0.83) 3 (0.78) 23 (12.57)											
Female						409 (42.47) 125 (49.21) 89 (48.63)						Post graduate -- -- -- -- 12 (6.56)											
												Not known -- -- -- -- 10 (5.46)											

COMMUNITY SURVEY

Table 14 contd...

	Rural No (%)	Slum No (%)	Urban No (%)
Religious Activity			
Yes	913 (94.80)	171 (67.32)	147 (80.0)
No	44 (11.57)	74 (29.13)	24 (13.11)
Not known	6 (0.62)	9 (3.54)	12 (6.56)
Religious practices at home			
Yes	917 (95.22)	116 (45.67)	143 (78.14)
No	42 (4.36)	129 (50.79)	26 (14.21)
Not known	4 (0.42)	8 (3.15)	14 (7.65)
Religious activities in the past 12 mons.			
Daily	224 (23.26)	21 (8.27)	23 (12.57)
Weekly	360 (37.38)	15 (5.91)	79 (43.17)
Monthly	101 (10.49)	55 (21.65)	11 (6.00)
< 1 month	87 (9.03)	23 (9.06)	15 (8.20)
Festivals	78 (8.10)	35 (13.78)	14 (7.65)
Once a year	63 (6.54)	22 (8.66)	4 (2.19)
Nil	46 (4.78)	45 (17.72)	22 (12.02)
Not known	4 (0.42)	8 (3.15)	15 (8.20)

Table 14 contd...

		Rural	Slum	Urban			Rural	Slum	Urban
		No (%)	No (%)	No (%)			No (%)	No (%)	No (%)
Occupation					Type of School Attended				
Unemployed	18 (1.87)	33 (13.0)	12 (6.56)		Government	502 (94.54)	119 (86.86)	24 (14.56)	
Unskilled	147 (15.26)	103 (40.55)	14 (7.65)		Private	29 (5.46)	13 (9.40)	124 (75.15)	
Skilled	138 (14.33)	35 (13.78)	27 (14.75)		Not known	- -	5 (3.65)	17 (10.30)	
Clerical	36 (3.74)	14 (5.51)	21 (11.48)						
Farming	161 (16.72)	- -	- -						
Prof/ Managerial	5 (0.52)	1 (0.39)	16 (8.74)						
Unpaid house hold work	381 (39.56)	41 (16.14)	60 (32.79)						
Students	77 (8.0)	27 (10.62)	33 (18.03)						
Medium of Instruction									
Kannada	503 (94.73)	97 (70.80)	37 (22.42)						
English	3 (0.56)	1 (0.73)	74 (44.85)						
Urdu	- -	- -	32 (19.39)						
Tamil	21 (3.95)	23 (16.79)	14 (8.48)						
Telugu	4 (0.75)	11 (8.03)	4 (2.42)		House				
Not known	- -	5 (3.65)	4 (2.42)		Own	678 (70.40)	104 (40.91)	97 (53.0)	
Not known	- -	3 (1.18)	10 (5.46)		Rented	285 (29.60)	147 (57.87)	76 (41.53)	
No. of years stayed in the place of interview					Family Size				
					0 - 2	34 (3.53)	13 (5.12)	12 (6.56)	
					3 - 4	189 (19.63)	102 (40.16)	63 (34.43)	
0- 1 yr	9 (0.93)	49 (19.29)	6 (3.28)		5 - 6	358 (37.18)	63 (24.80)	54 (29.51)	
1- 5 yrs	14 (1.45)	43 (16.93)	9 (4.92)		7 - 8	233 (24.20)	42 (16.54)	36 (19.67)	
6-10 yrs	20 (2.08)	37 (15.57)	14 (7.65)		9 - 10	96 (9.97)	16 (6.30)	12 (6.56)	
11-14 yrs	62 (4.36)	32 (12.60)	22(12.02)		11 and above	54 (5.61)	18 (3.32)	6 (3.28)	
15-19 yrs	58 (6.02)	26 (10.24)	32(17.49)						
Above 20yrs	122(12.67)	24 (9.45)	26 (14.21)						
Since birth	698 (72.48)	40 (15.75)	68 (37.16)						
Not known	- -	3 (1.18)	3 (1.64)						

TABLE 15 SOCIO-DEMOGRAPHIC DETAILS OF DRUG USERS

Rural						Slum						Urban											
No		(%)		No		(%)		No		(%)		No		(%)									
Age												Religion											
10-14		-		-		1 (11.11)		-		-		Hindu		32 (100.0)		6 (66.67)		1 (25.0)					
15-19		-		-		3 (33.33)		1 (25.0)				Muslim		-		-		1 (11.11) 1 (25.0)					
20-24		-		-		3 (33.33)		2 (50.0)				Christian		-		-		2 (22.22) 2 (50.0)					
25-29		2 (6.25)		1 (11.11)		1 (25.0)						Occupation											
30-34		1 (3.13)		-		-		-		-		Unskilled		12 (37.5)		4 (44.44)		-					
35-39		3 (9.38)		-		-		-		-		Farmers		10 (31.25)		-		-					
40-44		4 (12.50)		1 (11.11)		-		-				Skilled		6 (18.75)		2 (22.22)		1 (25.0)					
45-49		6 (18.75)		-		-		-		-		Business		3 (9.38)		-		1 (25.0)					
50-54		5 (15.62)		-		-		-		-		Unemp.		1 (3.13)		3 (33.33)		-					
55-59		6 (18.75)		-		-		-		-		Students		-		-		2 (50.0)					
60-64		3 (9.38)		-		-		-		-		Education											
65-69		2 (6.25)		-		-		-		-		Illiterates		16 (50.0)		3 (33.33)		-					
N		32		9		4						Primary		12 (37.5)		3 (33.33)		-					
												Secondary		4 (12.5)		1 (11.11)		-					
												Higher Sec.		-		-		2 (22.22) 1 (25.0)					
												Under grad.		-		-		2 (50.0)					
												Graduate		-		-		1 (25.0)					
												Post grad.		-		-		1 (25.0)					
Marital Status																							
Married		26 (81.25)		2 (22.22)		1 (25.5)																	
Single		4 (12.50)		7 (77.77)		3 (75.0)																	
Widowed		2 (6.25)		-		-																	

Table 15 contd...

Persons using specific drugs in the last month	Rural No (%)	Slum No (%)	Urban No (%)	Persons using specific drugs in the last month	Rural No (%)	Slum No (%)	Urban No (%)
Cannabis				Opium			
Once or twice	17 (53.13)	2 (22.22)	2 (25.0)	Once or twice	- -	- -	- -
Almost weekly	11 (34.38)	1 (11.11)	- -	Almost weekly	3 (9.38)	- -	- -
Almost daily	4 (12.5)	1 (11.11)	- -	Almost daily	- -	- -	- -
Amphetamines				Inhalants			
Once or twice	- -	- -	- -	Once or twice	- -	1 (11.11)	- -
Almost weekly	- -	- -	- -	Almost weekly	- -	2 (22.22)	- -
Almost daily	- -	- -	- -	Almost daily	- -	- -	- -
Tranquilizers				No. of Drug Using Friends			
Once or twice	- -	- -	1' (25.)	None	3 (9.38)	- -	- -
Almost weekly	- -	- -	- -	Less than half	10 (31.25)	2 (22.22)	2 (50.0)
Almost daily	- -	- -	- -	About half	13 (40.63)	3 (33.33)	1 (25.0)
Barbiturates/ Sedatives				Almost all	6 (18.75)	4 (44.44)	1 (25.0)
Once or twice	- -	1 (11.11)	- -	Frequency of meeting Drug using Friends			
Almost weekly	- -	- -	- -	Almost daily	2 (6.26)	5 (55.55)	1 (25.0)
Almost daily	- -	- -	- -	2-5 times a week	3 (9.38)	2 (22.22)	- -
Cocaine				About once a week	17 (53.13)	2 (22.22)	2 (50.0)
Once or twice	- -	- -	- -	2-3 times a week	6 (18.75)	- -	- -
Almost weekly	- -	- -	- -	Once a month or less	4 (12.05)	- -	1 (25.0)
Almost daily	- -	- -	- -	Never	- -	- -	- -
Heroin							
Once or twice	- -	- -	- -				
Almost weekly	- -	- -	- -				
Almost daily	- -	- -	1 (25.0)				

	Rural No (%)	Slum No (%)	Urban No (%)		Rural No (%)	Slum No (%)	Urban No (%)
Amount of free time spent with Drug using Friends				Time of day for meeting Drug using friends			
None	-	-	-	Anytime of day	2 (6.25)	3 (33.33)	1 (25.0)
Less than half	9 (28.13)	1 (11.11)	2 (50.0)	Usually in morning	2 (6.25)	-	-
About half	4 (12.5)	3 (33.3)	1 (25.0)	Usually in afternoon	-	-	-
Almost all	19 (59.38)	5 (55.55)	1 (25.0)	Usually in evening	28 (87.5)	3 (33.33)	2 (50.0)
Usual meeting place with Drug using friends				Usually at night	-	-	1 (25.0)
School/College	-	-	-	All day long	-	3 (33.33)	-
Work	1 (3.13)	2 (22.22)	-	Reasons for meeting Drug using friends			
Social Clubs	-	-	-	Take drugs together	20 (62.5)	6 (66.66)	1 (25.0)
Private parties	-	-	-	Exchange information	8 (25.0)	-	-
Bars/Taverns	2 (6.25)	1 (11.11)	2 (50.0)	Sell, buy, exchange drugs	-	1 (11.11)	-
Street	-	5 (55.55)	1 (25.0)	Meet girls/boys	-	-	-
Parks	-	1 (11.11)	-	Plan/attend social events	-	-	2 (50.0)
Athletic/Recreational setting	-	-	1 (25.0)	Talk about drugs	4 (12.5)	2 (22.22)	1 (25.0)
Temples	16 (50.0)	-	-	Hobbies			
Fields	13 (40.63)	-	-	Yes	9 (28.13)	1 (11.11)	3 (75.0)
				No	23 (71.88)	8 (88.89)	1 (25.0)
				Religious participation in the last 12 months			
				Once a week	26 (81.25)	-	2 (50.0)
				Once a month	4 (12.50)	-	1 (25.0)
				Less than a month	2 (6.25)	1 (11.11)	-
				Did not participate	-	8 (88.88)	1 (25.0)

Table 15 contd...

	Rural		Slum		Urban	
	No	(%)	No	(%)	No	(%)
Family history of drug taking						
Father						
Smoke	26	(81.25)	6	(66.66)	2	(2.50)
Drink	21	(65.63)	7	(77.77)	1	(1.25)
Drugs	14	(43.75)	1	(11.11)	-	-
Mother						
Smoke	-	-	-	-	-	-
Drink	-	-	2	(22.22)	1	(2.5)
Drugs	-	-	-	-	-	-
	Rural		Slum		Urban	
	No	(%)	No	(%)	No	(%)
Age of first Drug use						
10 - 14	-	-	2	(20.0)	-	-
15 - 19	-	-	6	(60.0)	2	(50.0)
20 - 24	1	(3.13)	1	(10.0)	2	(50.0)
25 - 29	3	(9.38)	1	(10.0)	-	-
30 - 34	14	(43.75)	-	-	-	-
35 - 39	13	(40.62)	-	-	-	-
40 - 44	1	(3.13)	-	-	-	-
45 - 49	-	-	-	-	-	-
Reason for first use						
Curiosity/Ex- perimentation	-	-	4	(44.44)	3	(75.0)
Boredom	-	-	5	(55.55)	1	(25.0)
Religious	27	(84.38)	-	-	-	-
Relaxation	5	(15.62)	-	-	-	-
Site of first use						
Temple	23	(71.88)	-	-	-	-
School/Colle.	-	-	-	-	2	(50.0)
Street	-	-	6	(67.0)	-	-
Pub/Bar	-	-	1	(11.11)	1	(25.0)
Home	-	-	-	-	-	-
Friend's residence	-	-	-	-	1	(25.0)
Park	-	-	2	(22.22)	-	-
Fields/ plantations	9	(28.13)	-	-	-	-

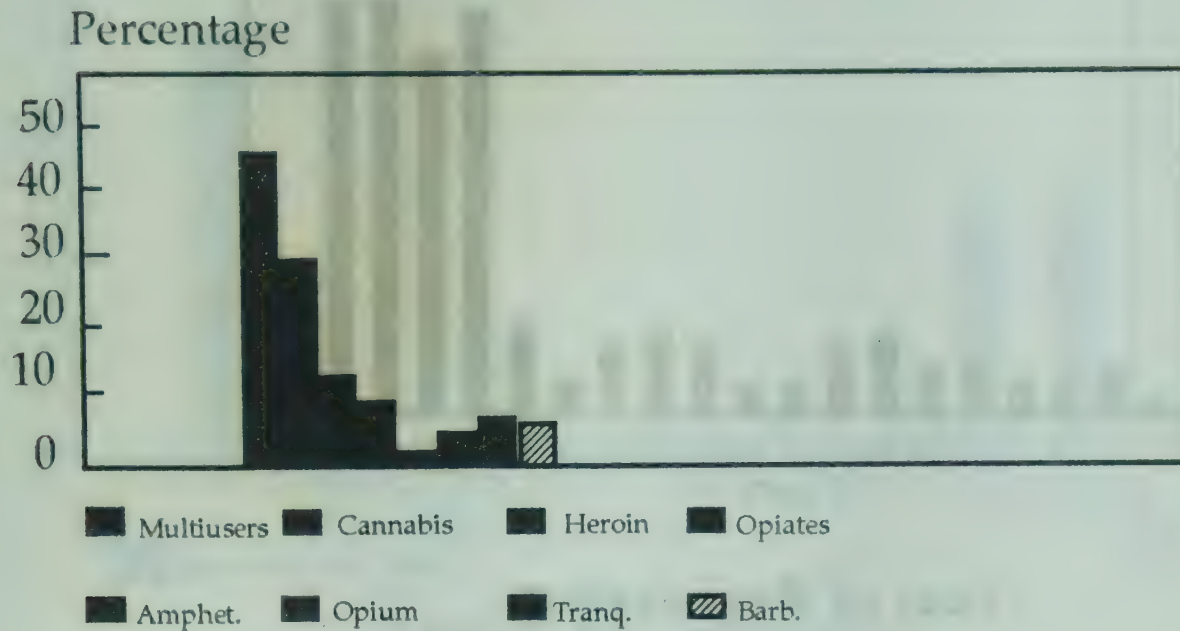
Table 16

SERVICES OFFERED BY DEMAND REDUCTION PROGRAMMES									
Service Available	Anti Drug Action	CAIM	CREST	Freedom Foundation	Hope Lions Club	NIMHANS	Serenity Counselling Centre	Sparsha Medical Hospital	St. John's TRADA
Information	*	*	*	*	*	*	*	*	*
Education	*	*	*	*	*	*	*	*	*
Community Development		*			*				
Crisis Intervention	*	*	*	*		*	*	*	*
Treatment	*	*	*	*		*	*	*	*
Rehabilitation	*	*	*	*		*	*	*	
Social reintegration and after care	*	*	*	*					
Interventions									
Detoxification	*	*	*	*		*	*	*	*
Counselling-Individual	*	*	*	*		*	*	*	*
Counselling-Family	*	*	*	*		*	*	*	*
Group Therapy	*	*	*	*		*	*	*	*
Meditation	*	*	*	*			*	*	*
Yoga	*	*	*	*			*	*	*
AA/NA	*	*	*	*			*	*	*
Play/Occupation	*	*	*	*			*	*	*

APPENDIX 2

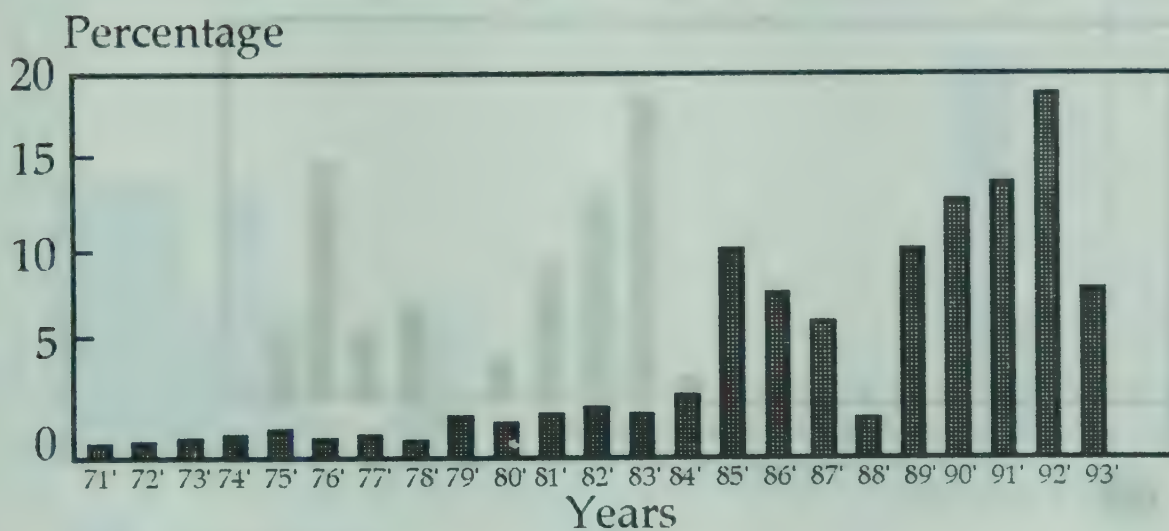
Categories of Drug Users (Total)

1



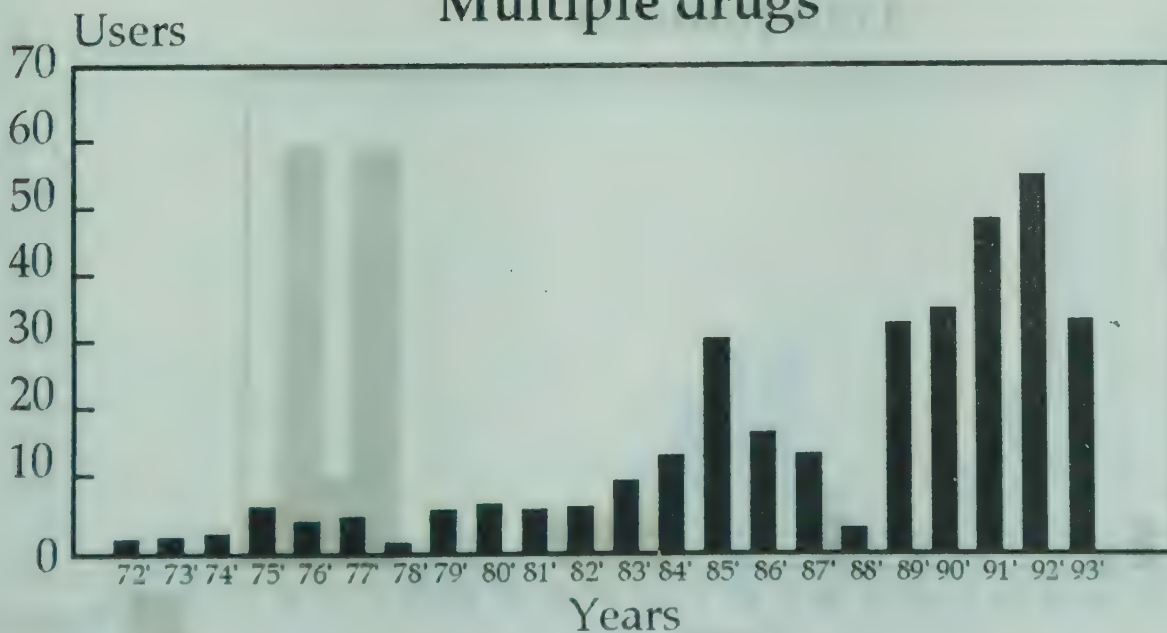
Years of Registration (Total)

2



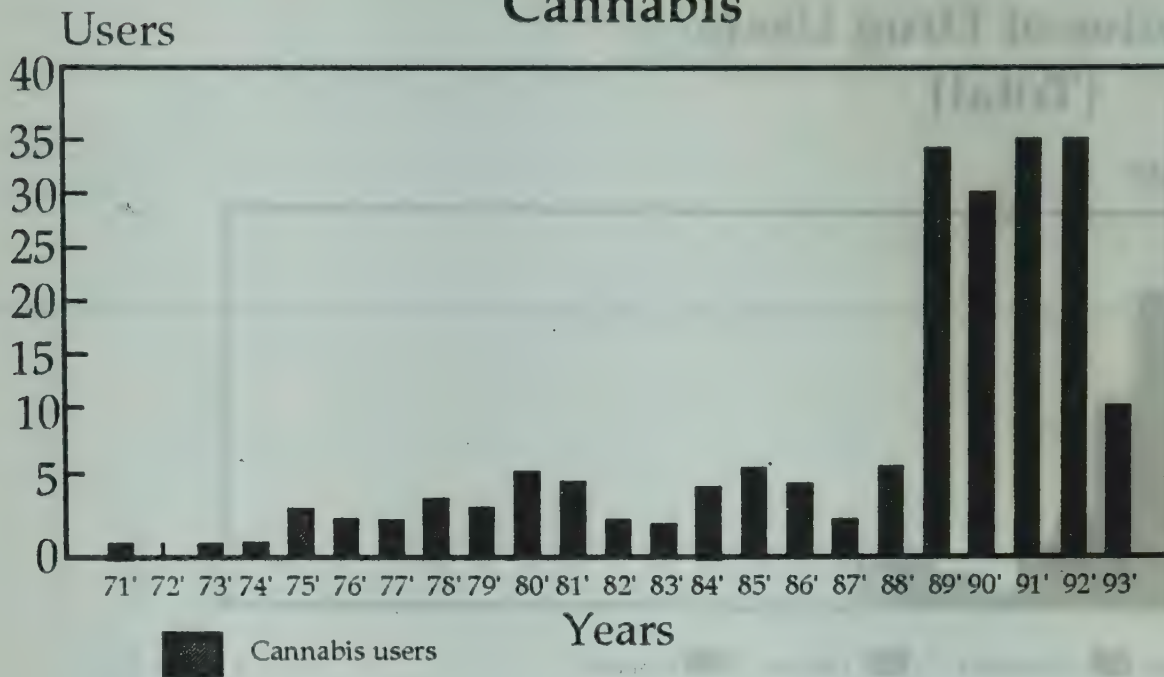
Year of Registration Multiple drugs

3



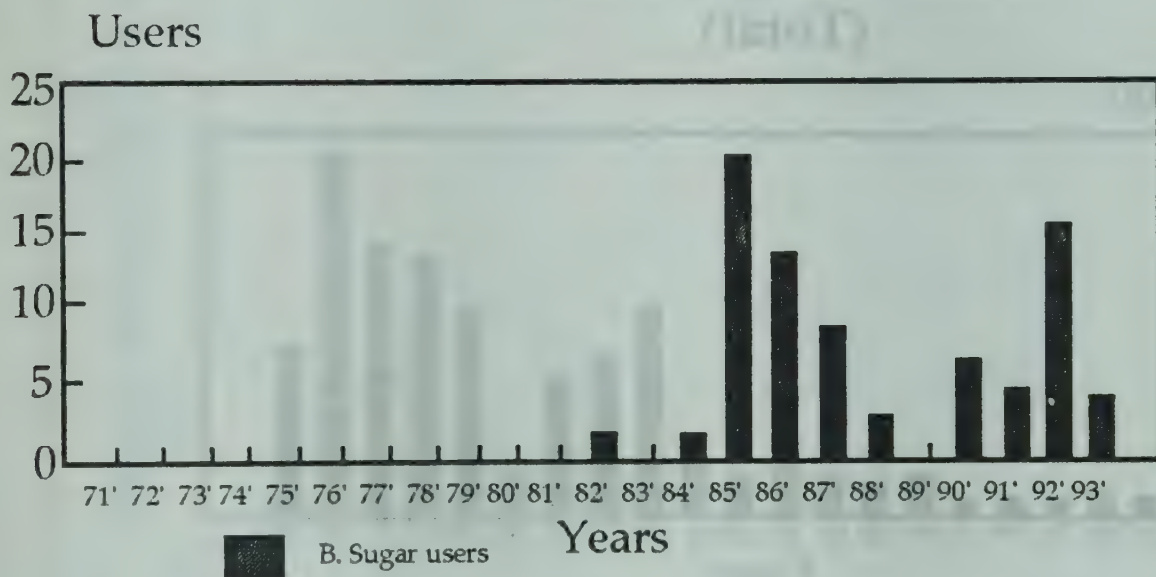
Year of Registration Cannabis

4



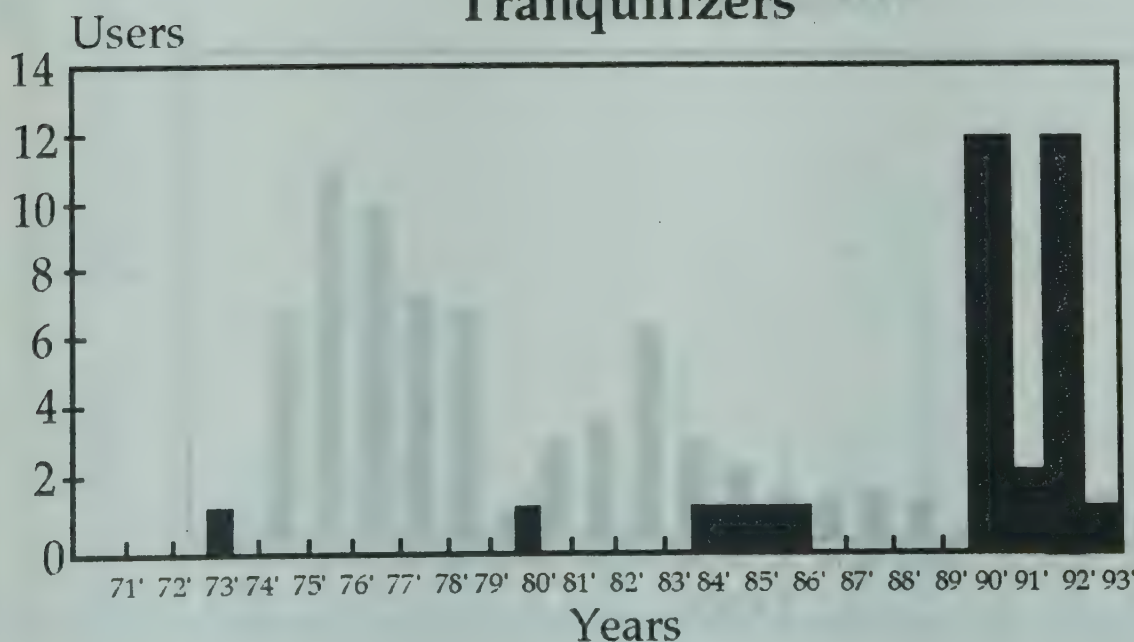
Year of Registration Heroin

5

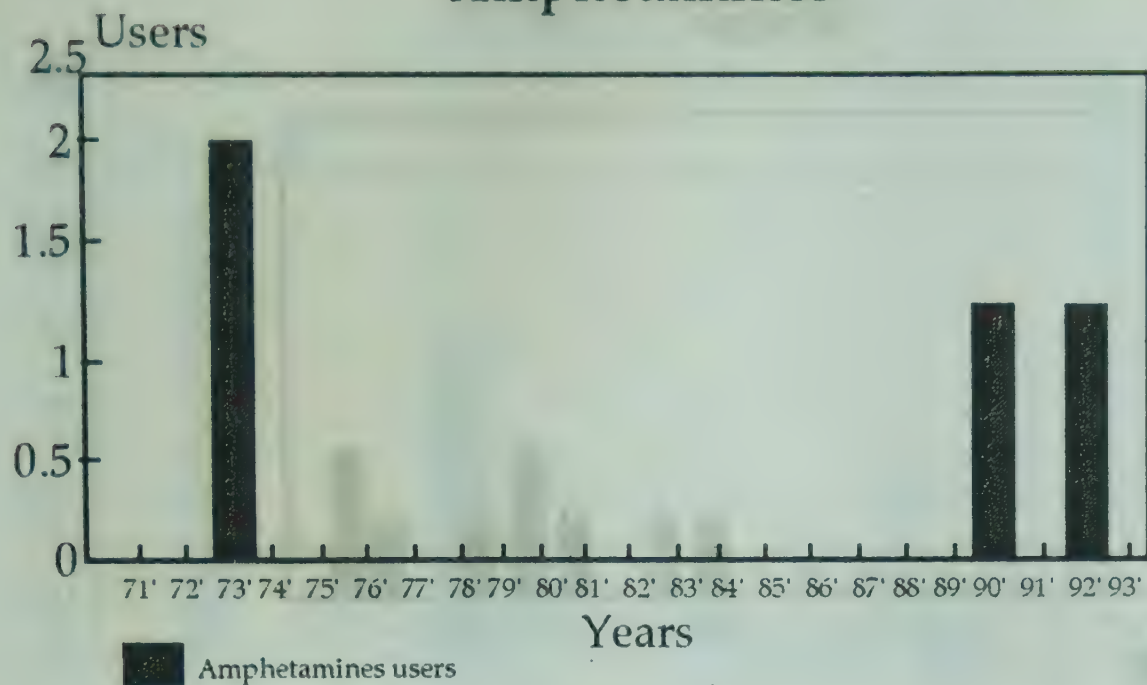


Year of Registration Tranquilizers

6

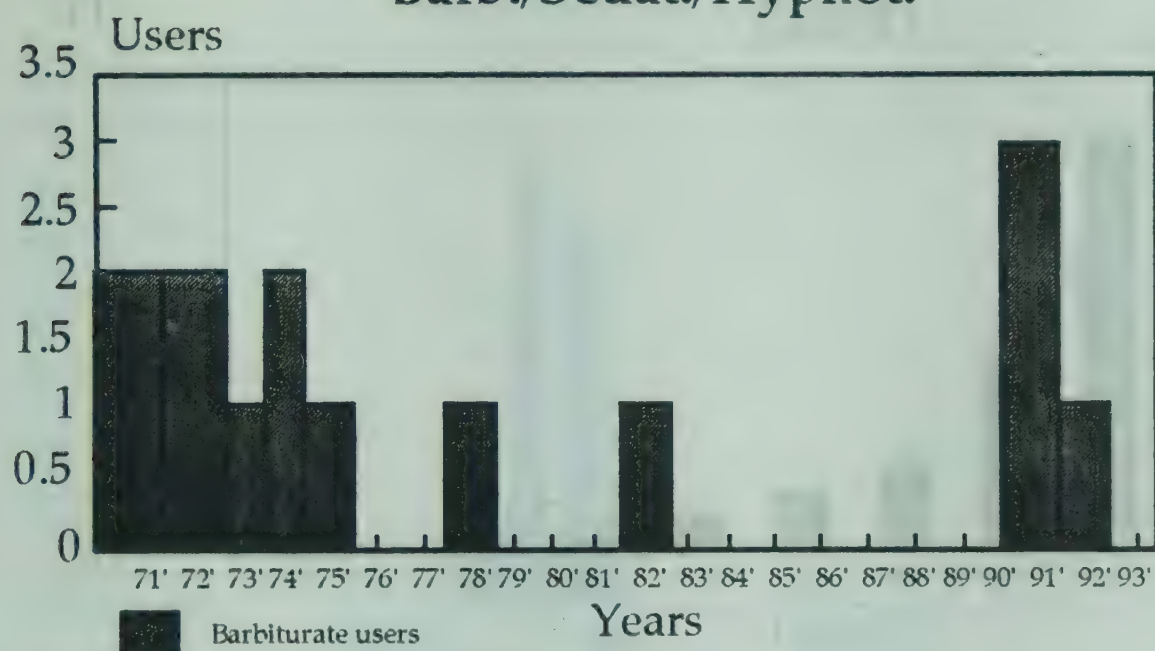


Year of Registration Amphetamines



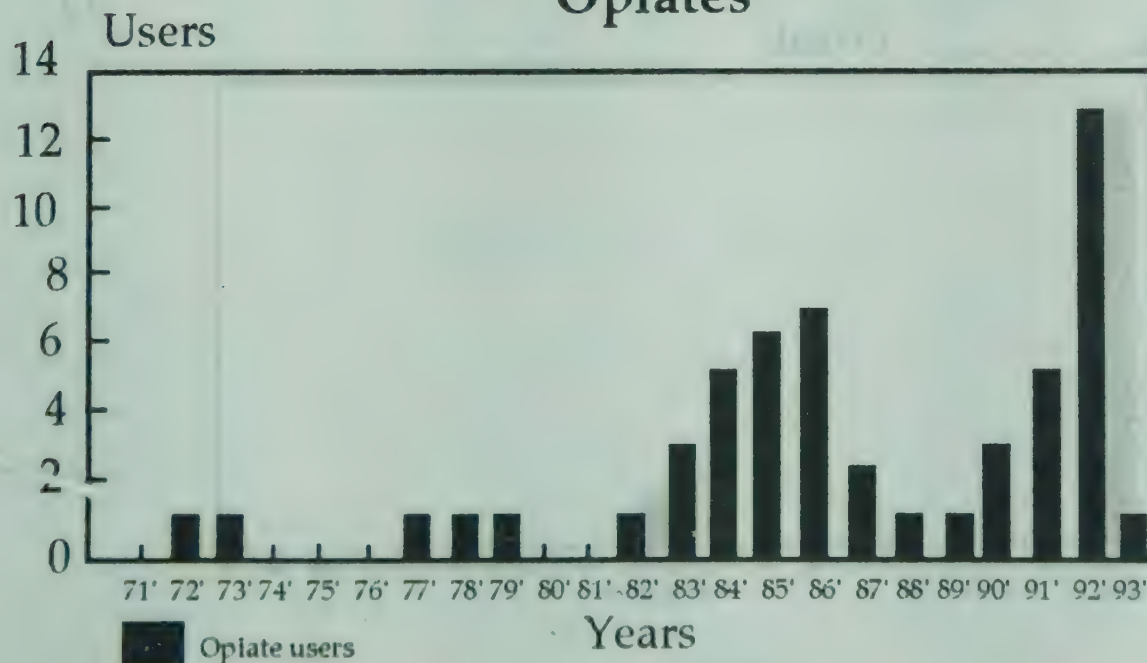
7

Year of Registration Barb./Sedat./Hypnot.



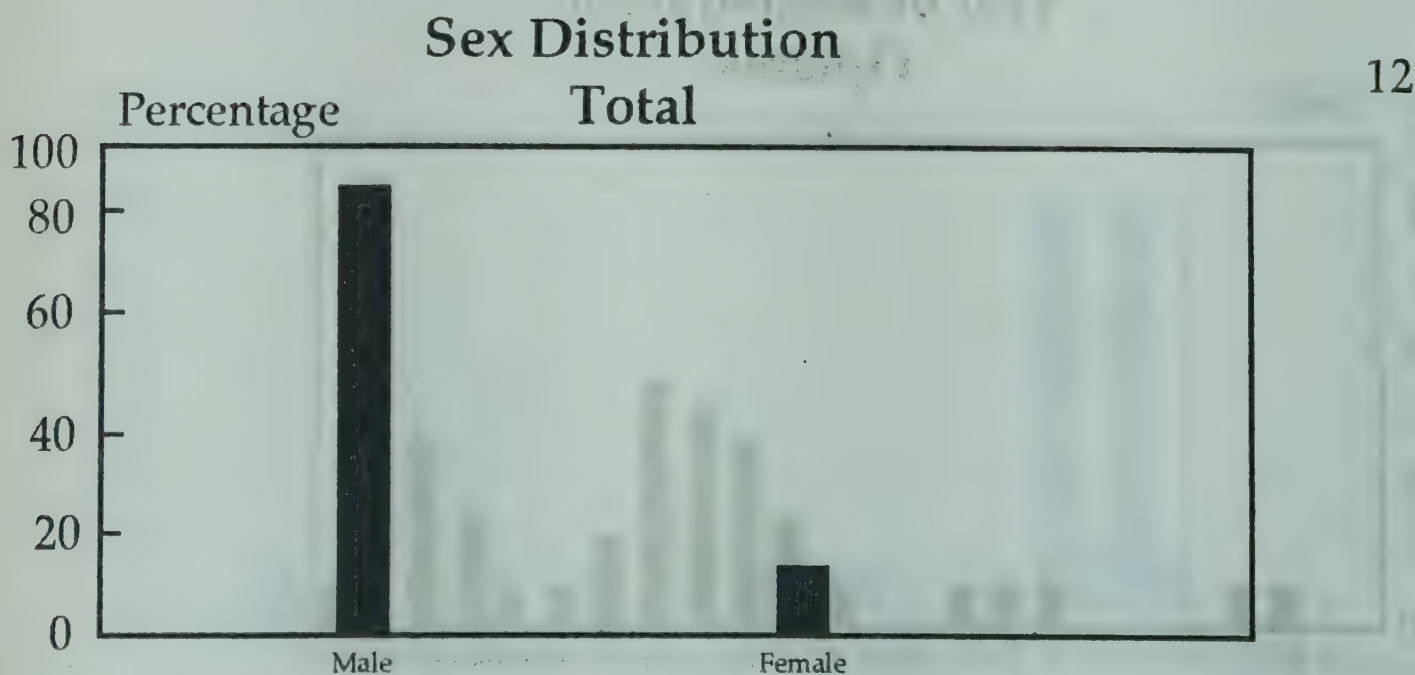
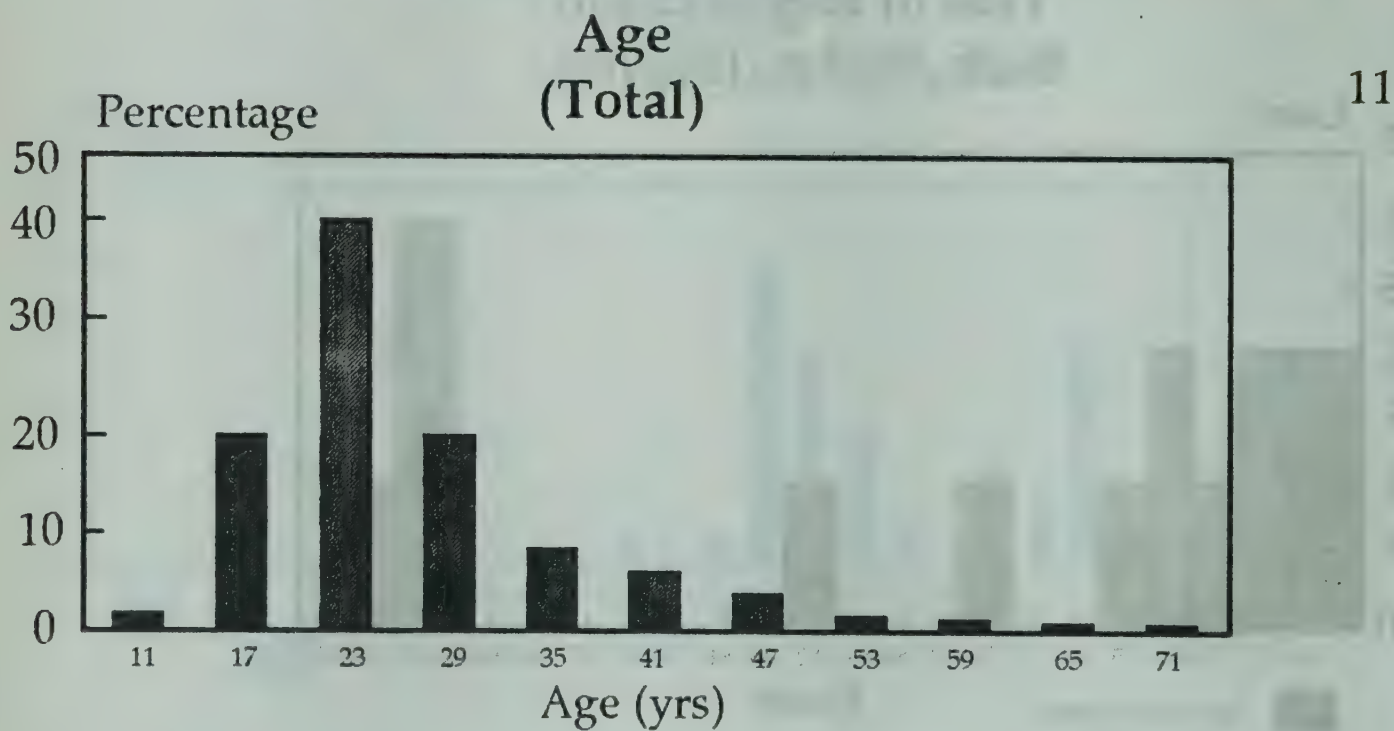
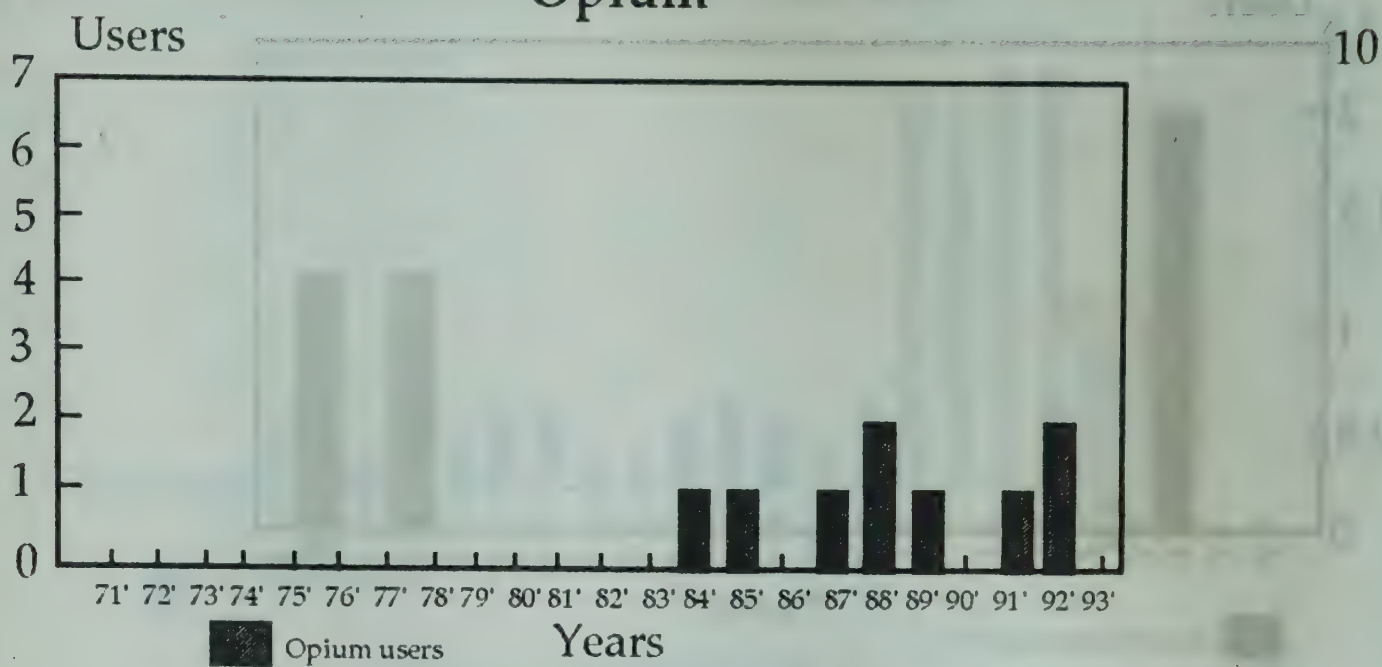
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Year of Registration Opiates



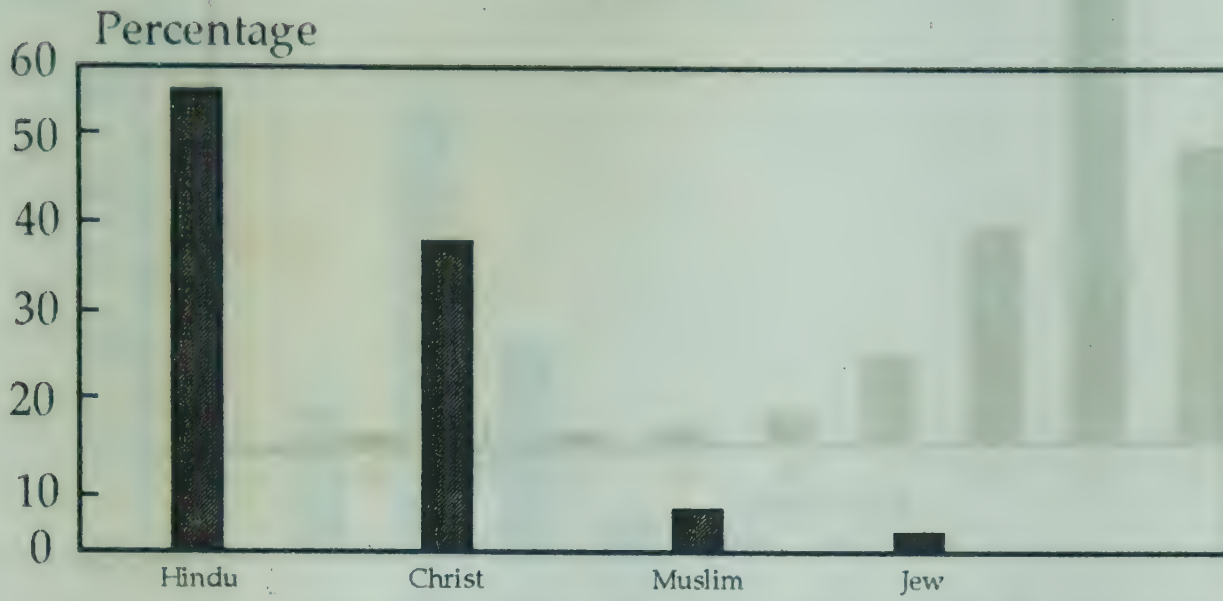
9

Year of Registration Opium



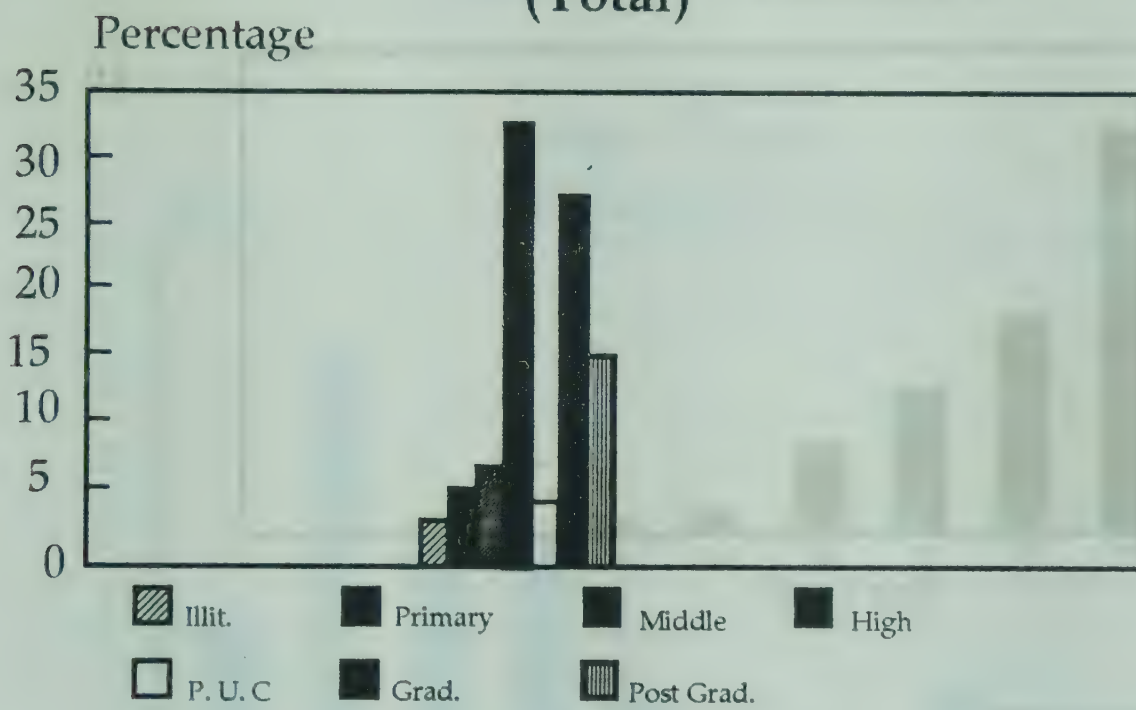
Religion (total)

13

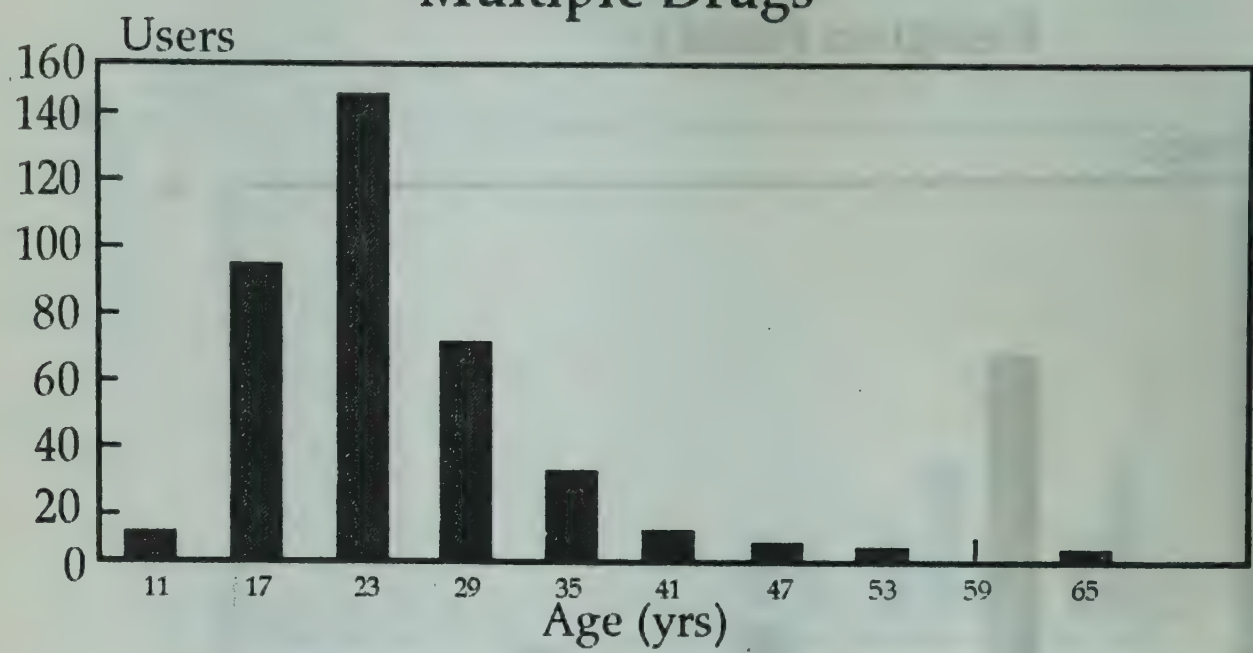


Education (Total)

14

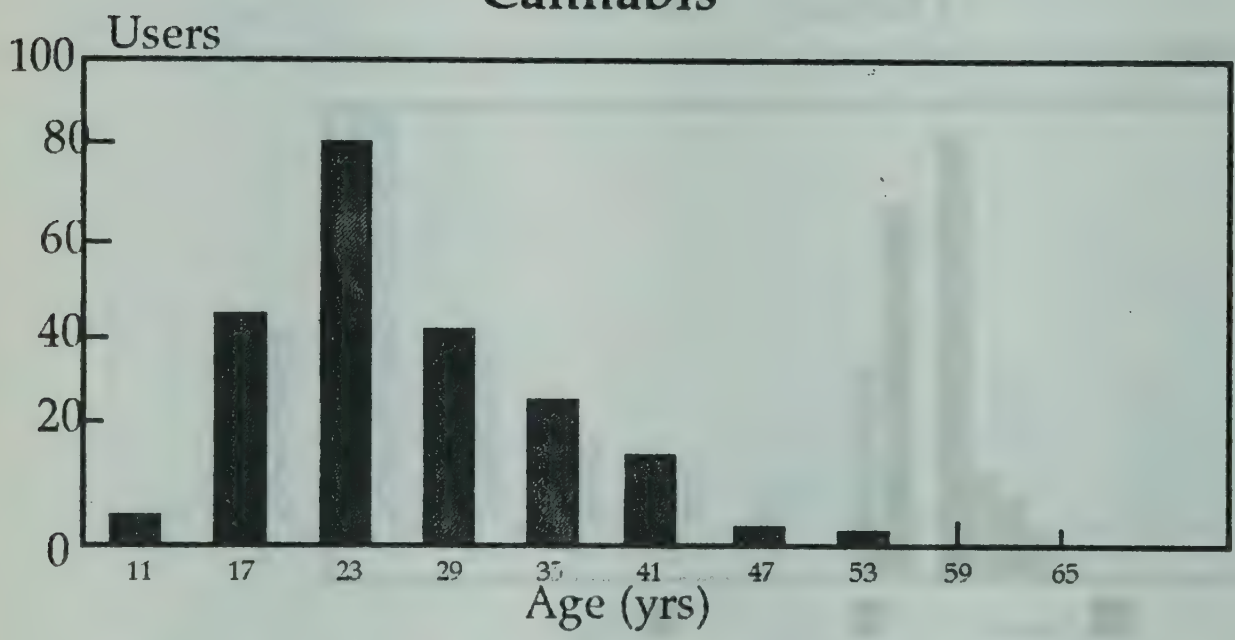


Age of users
Multiple Drugs



15

Age of users
Cannabis

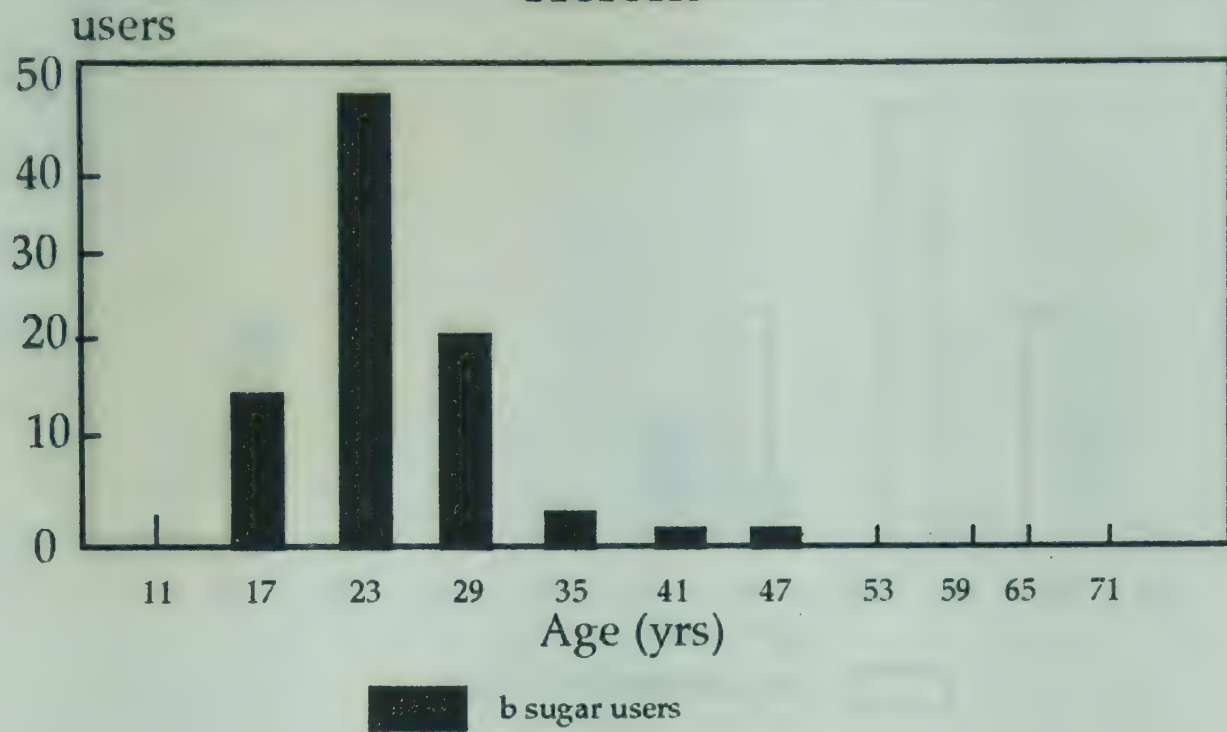


16

 Cannabis users

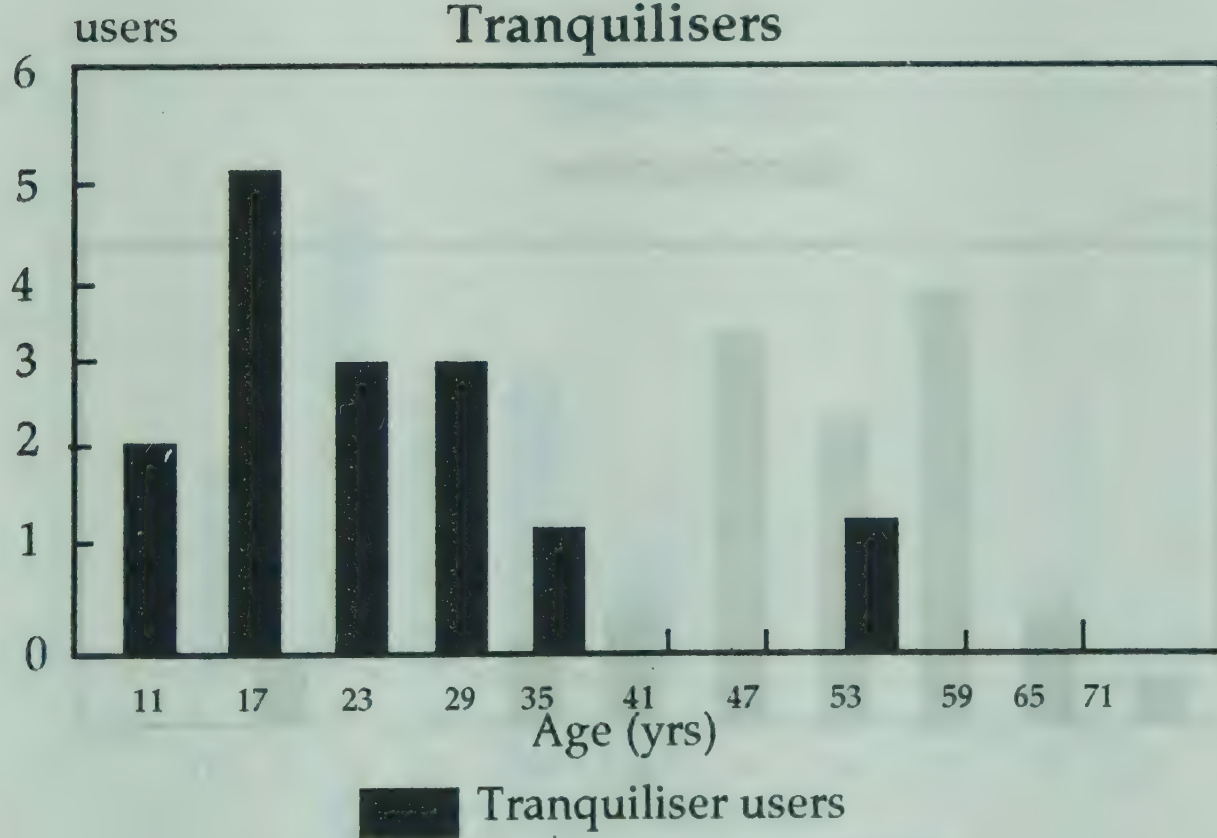
Age of users Heroin

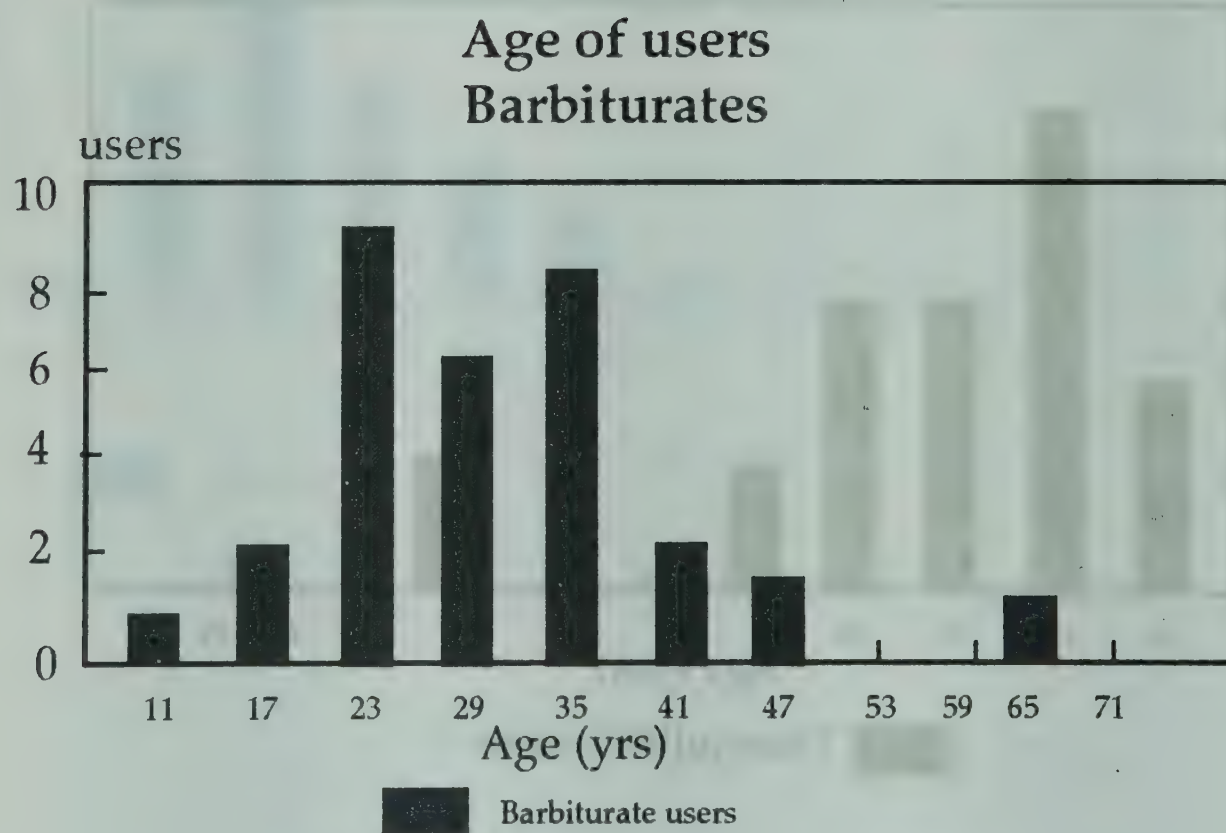
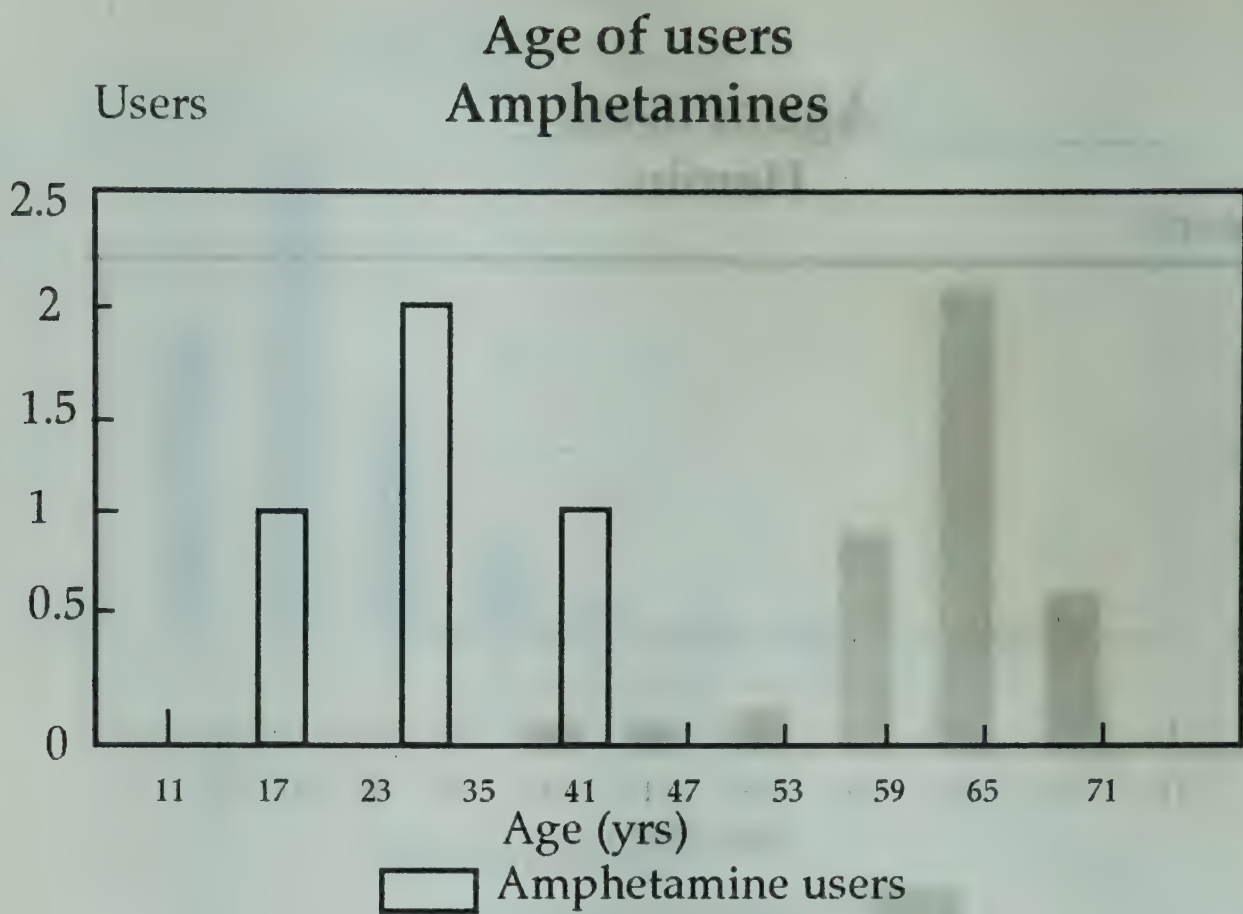
17



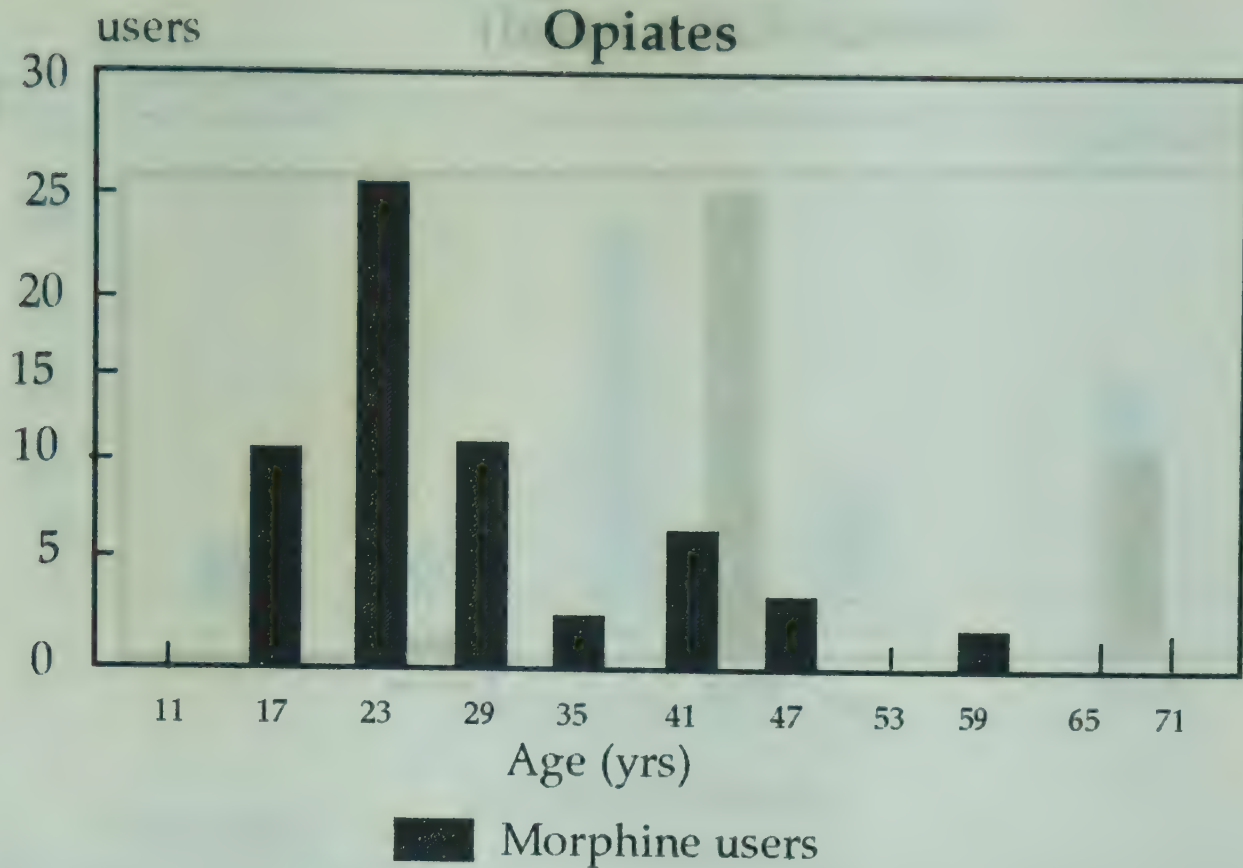
Age of users Tranquilisers

18



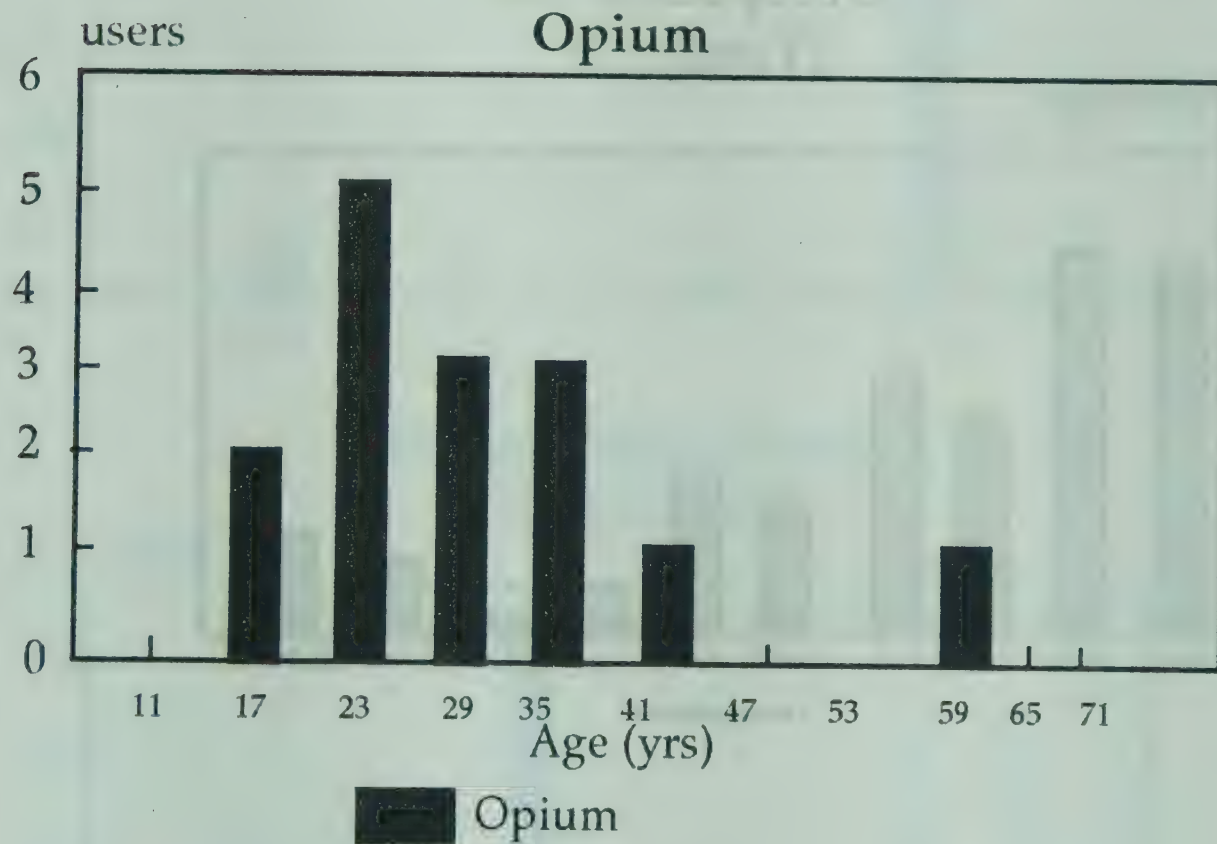


Age of users
Opiates



21

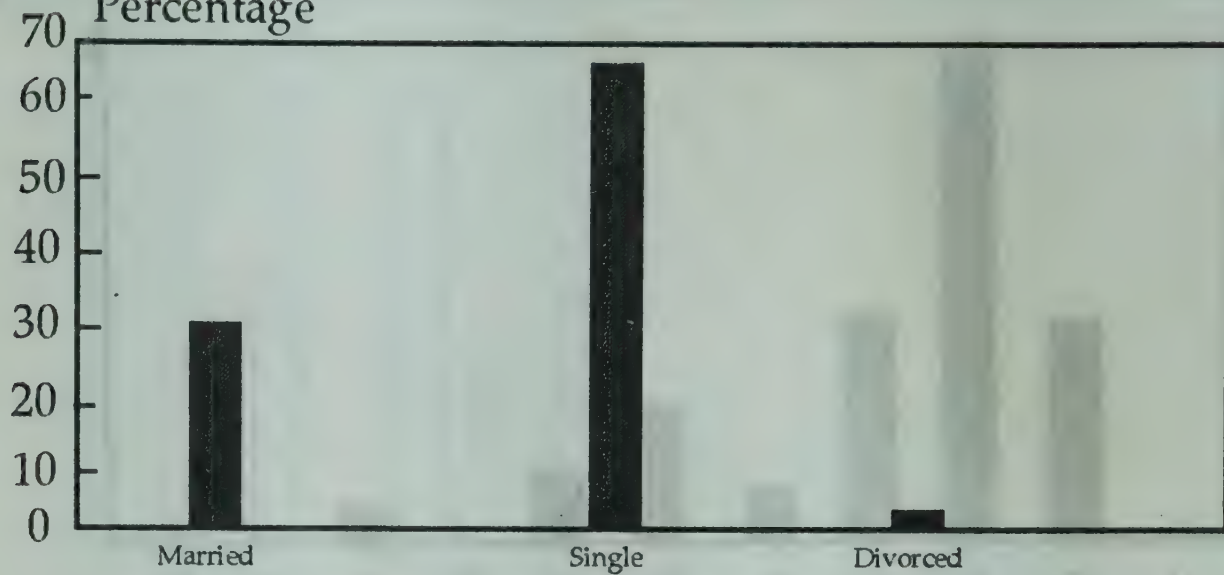
Age of users
Opium



22

Marital Status (total)

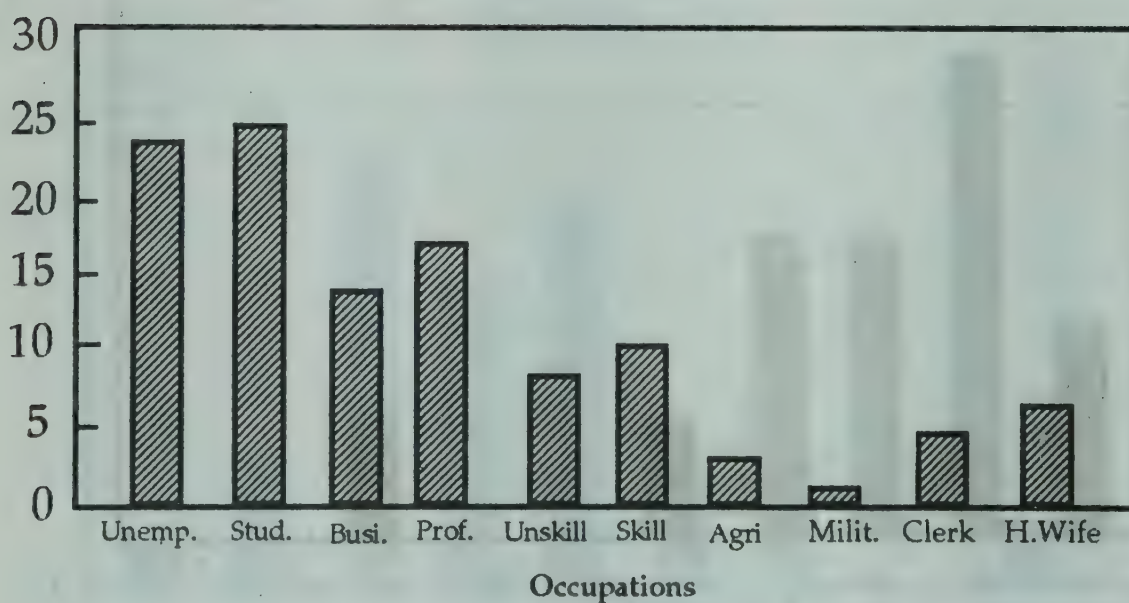
Percentage



23

Occupation (Total)

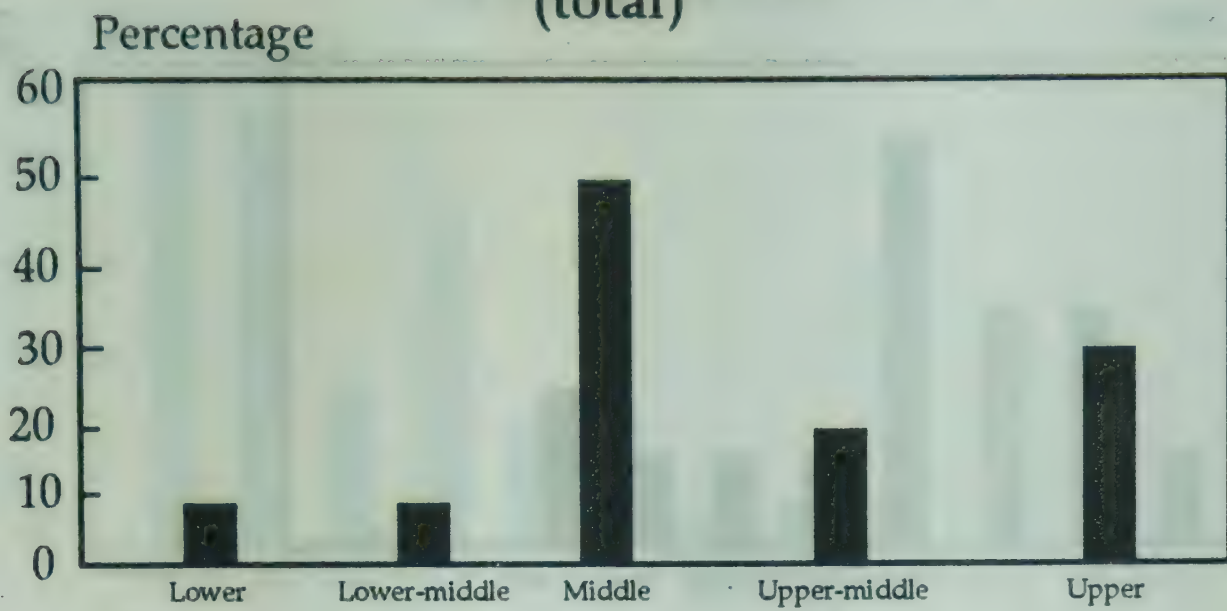
Percentage



24

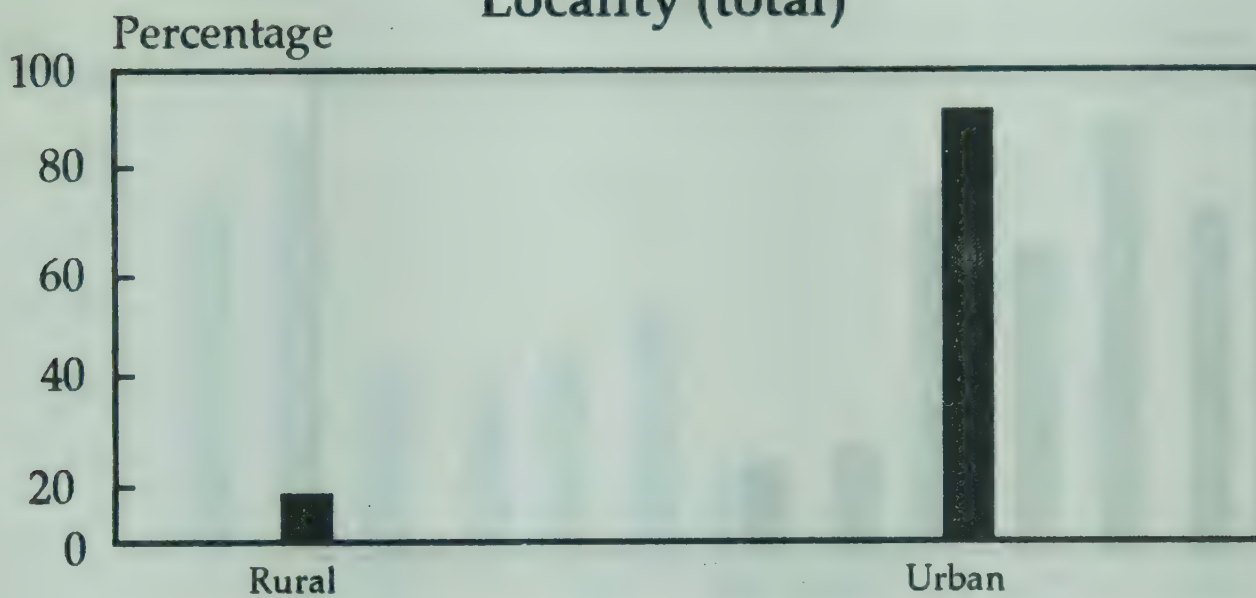
Socio Economic Stat. (total)

25



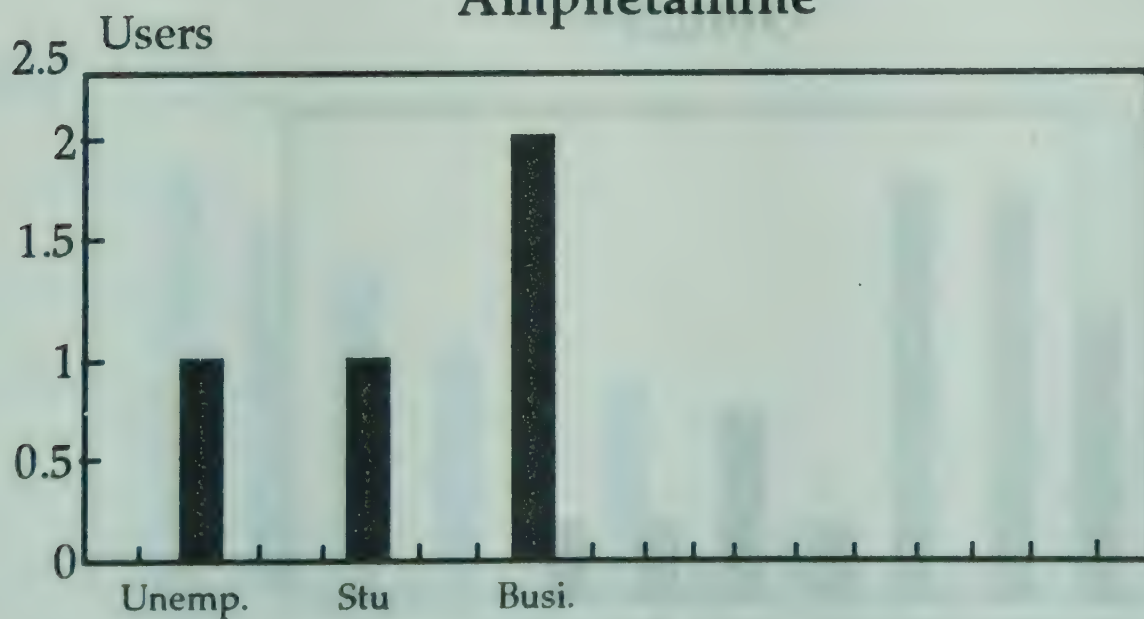
Locality (total)

26



Occupation of users Amphetamine

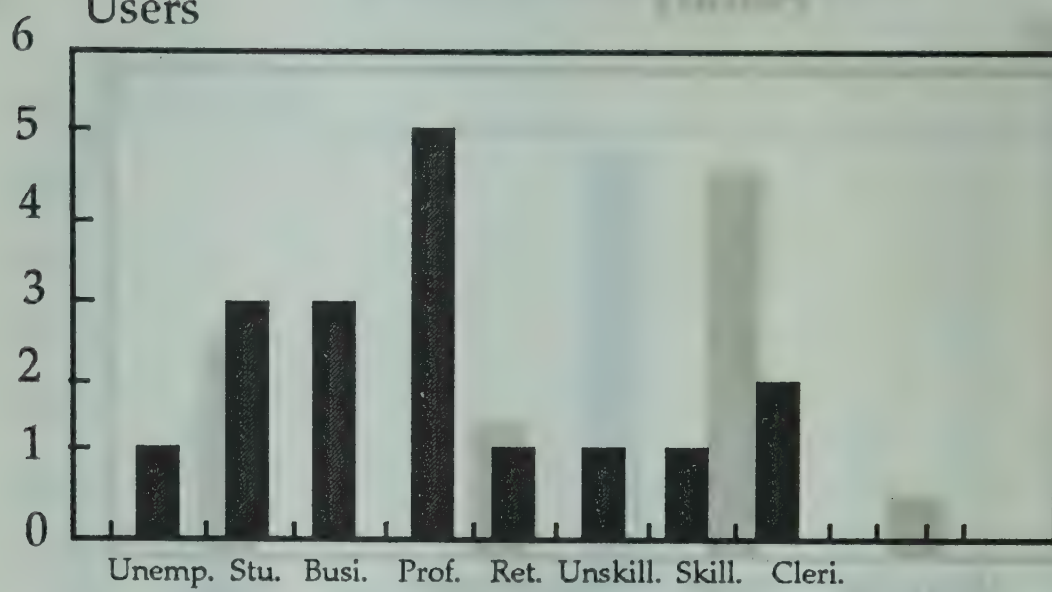
27



Occupation of users Barb.\Sedat.\Hypnot.

Users

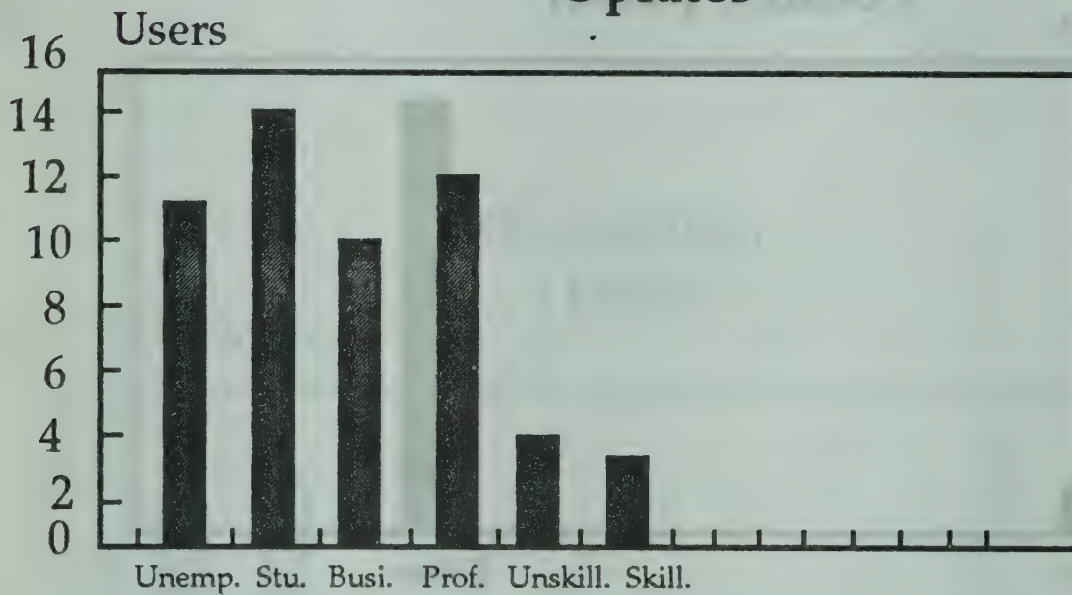
28



Occupation of users Opiates

Users

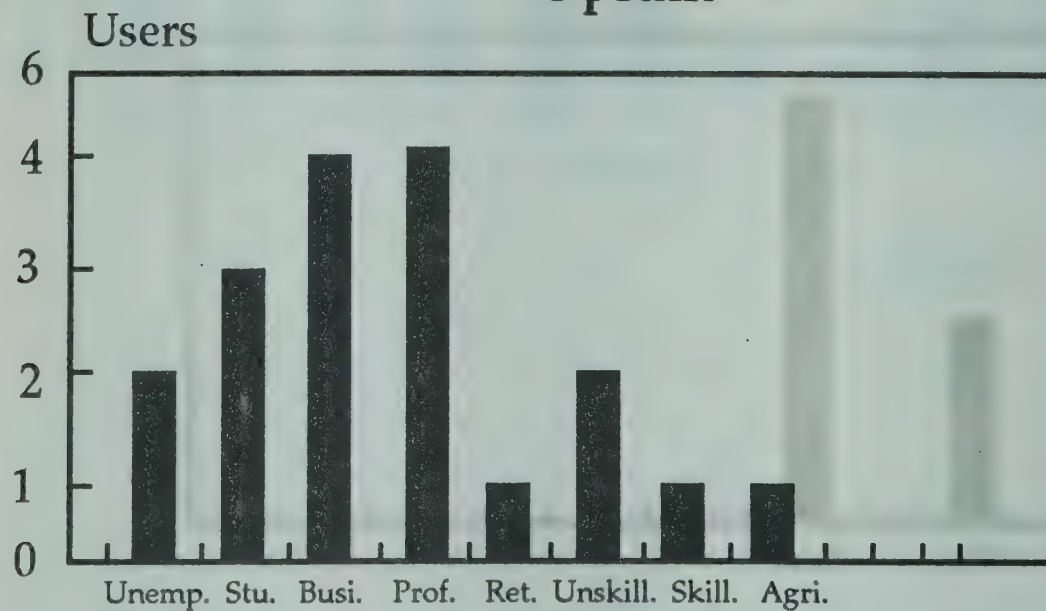
29



Occupation of users Opium

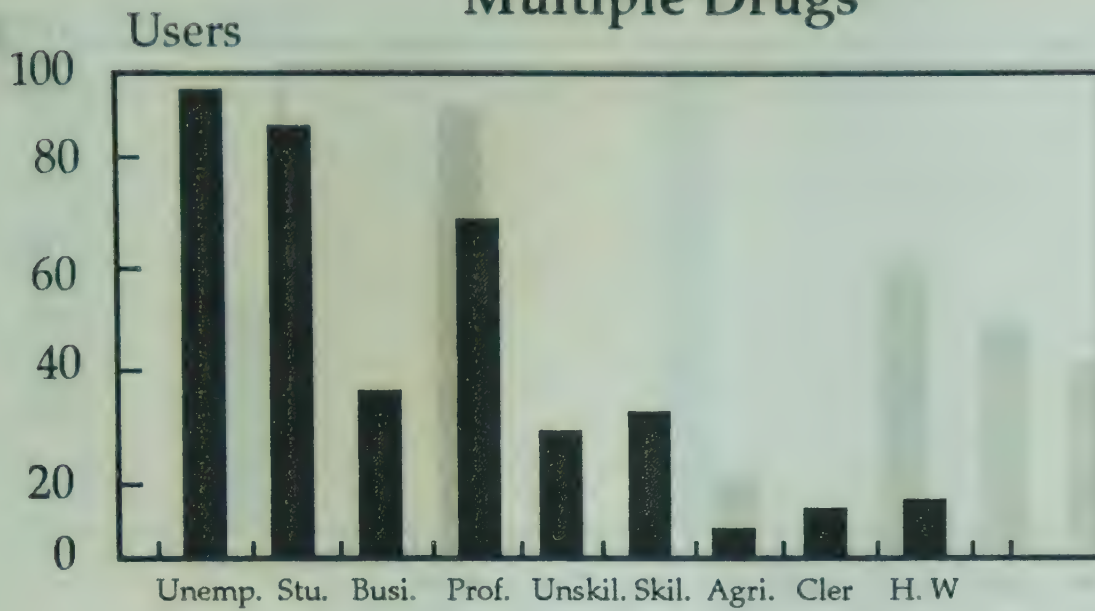
Users

30



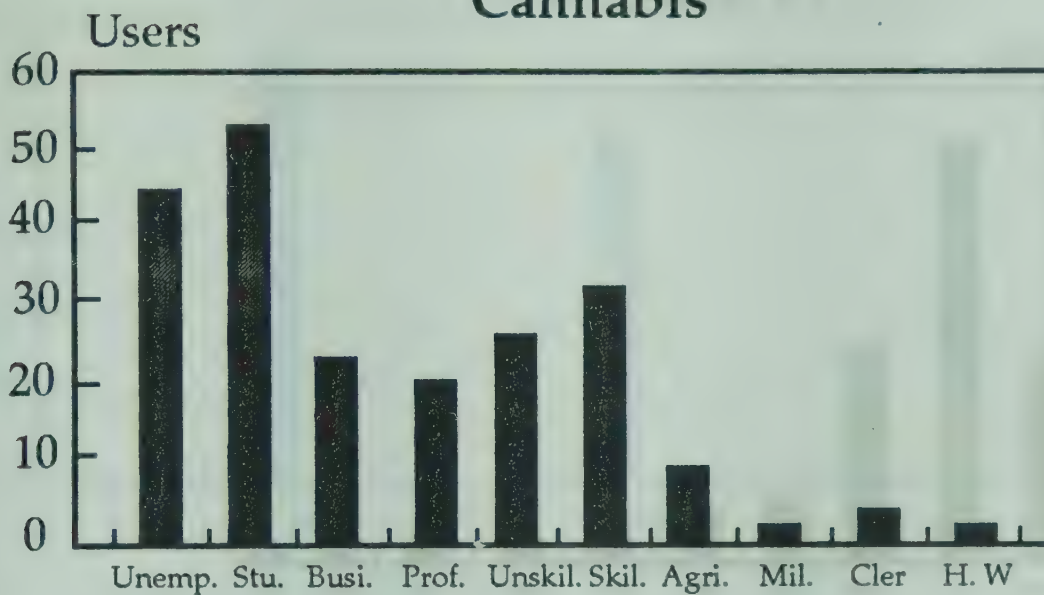
Occupation of users Multiple Drugs

31



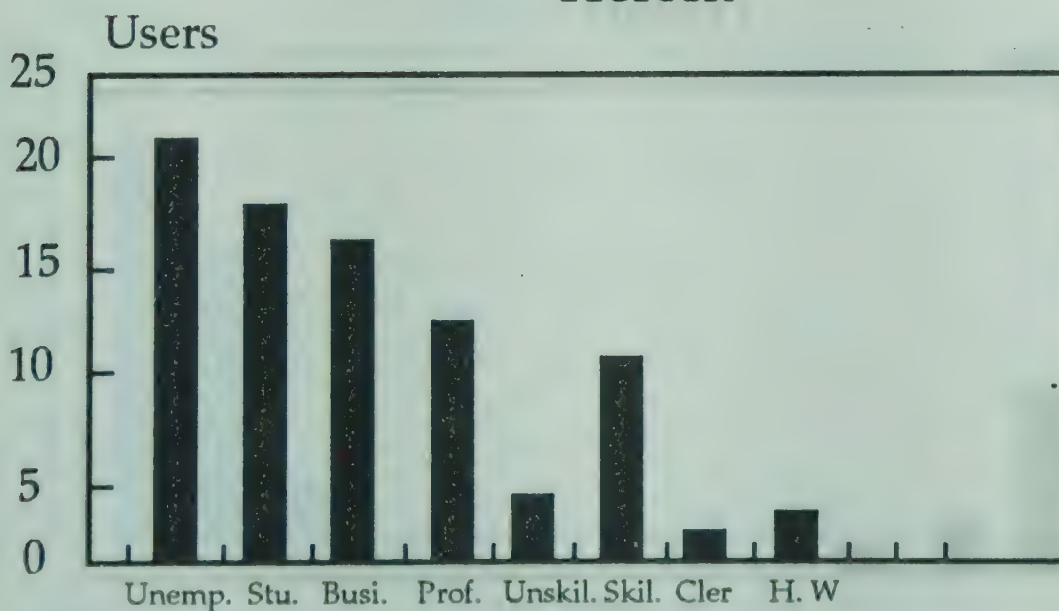
Occupation of users Cannabis

32

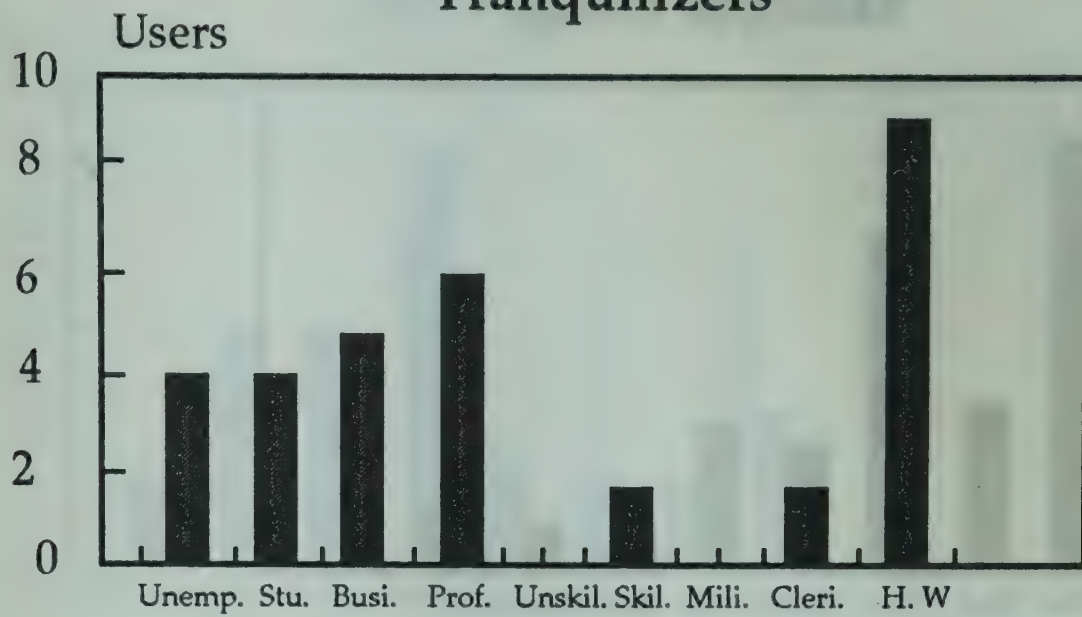


Occupation of users Heroin

33

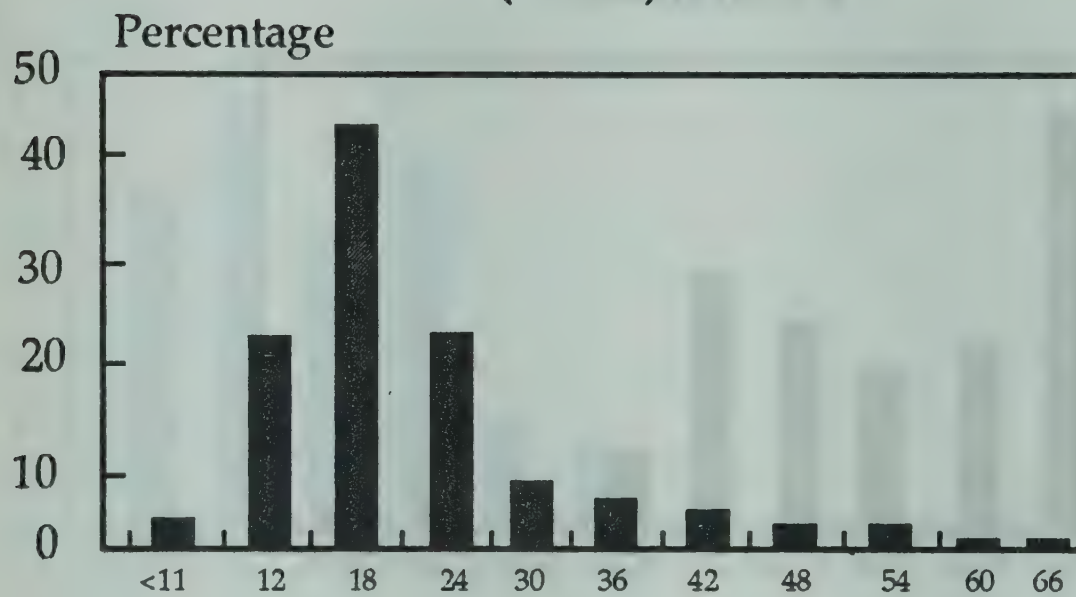


Occupation of users Tranquilizers



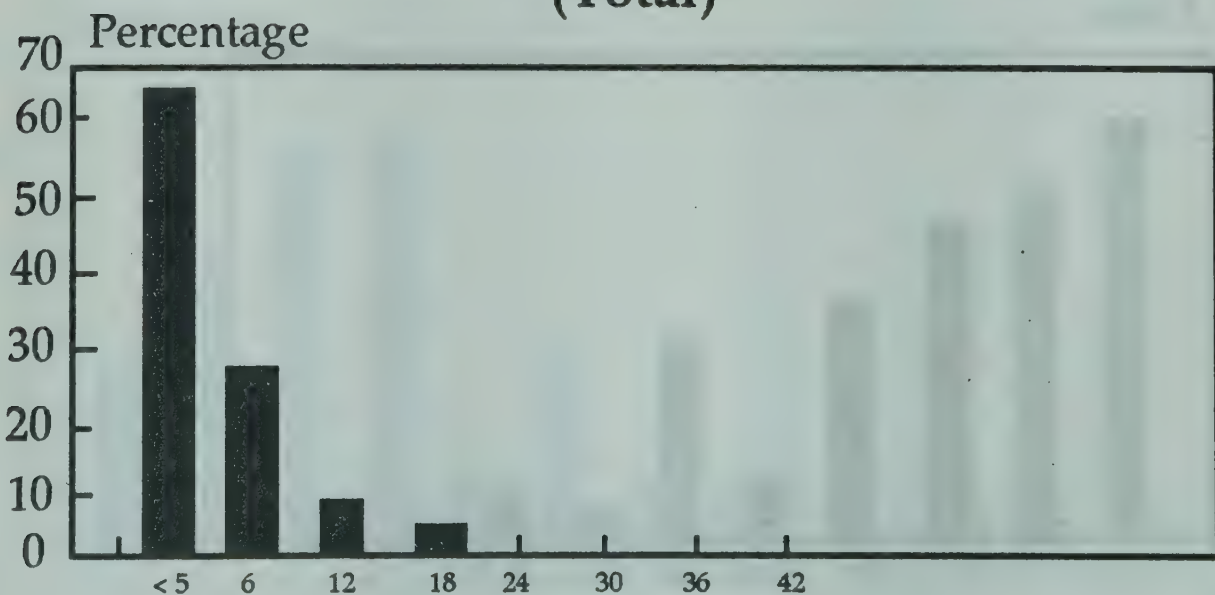
34

Age of Initiation (Total)



35

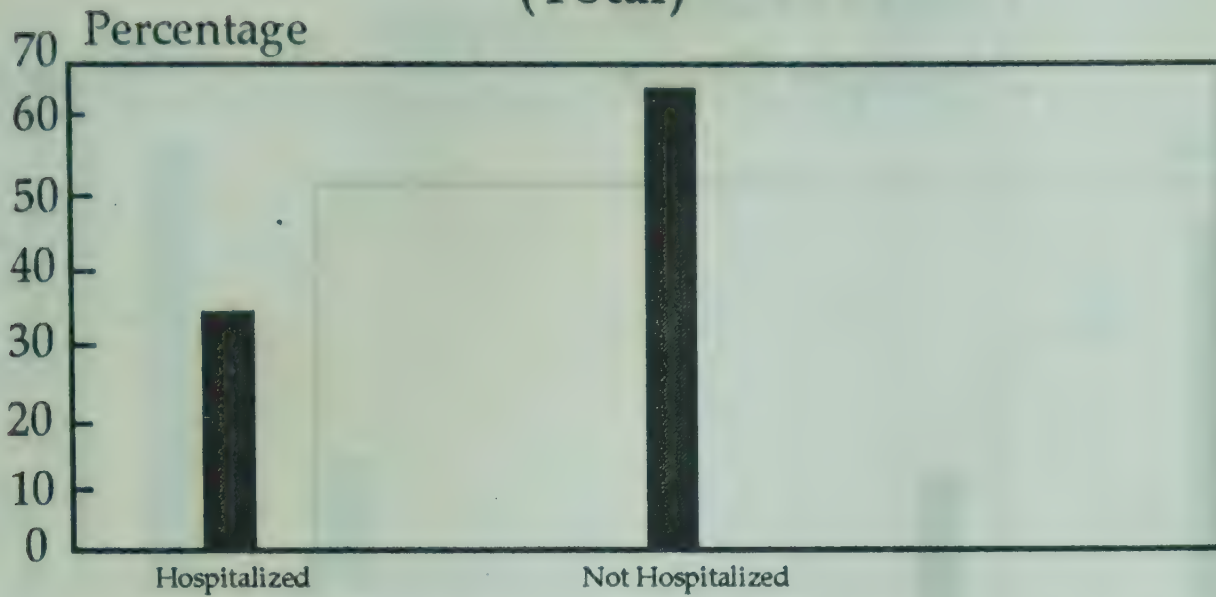
Length of Usage (Total)



36

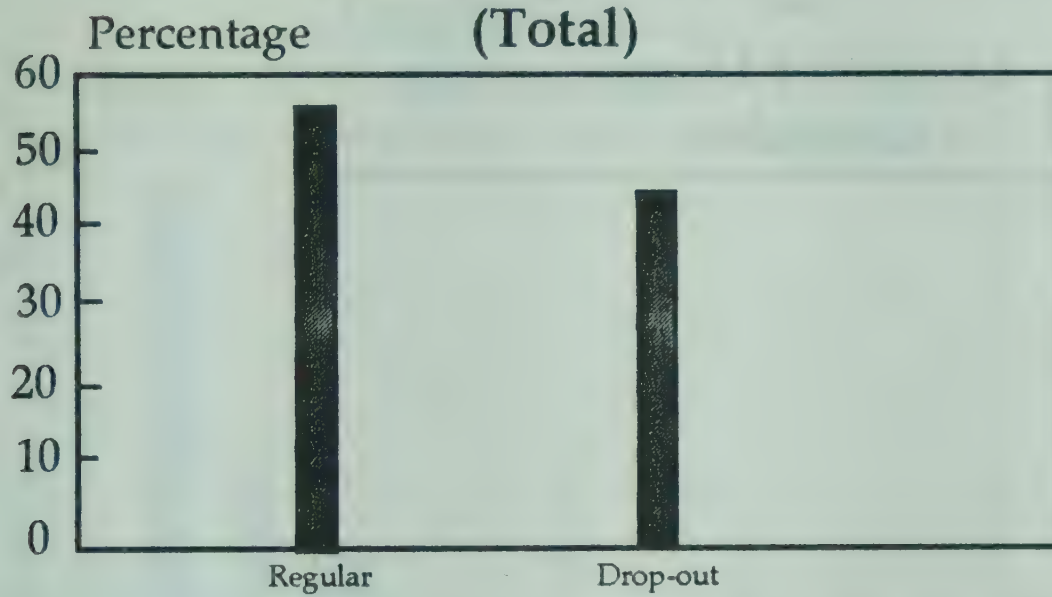
Hospitalization (Total)

37



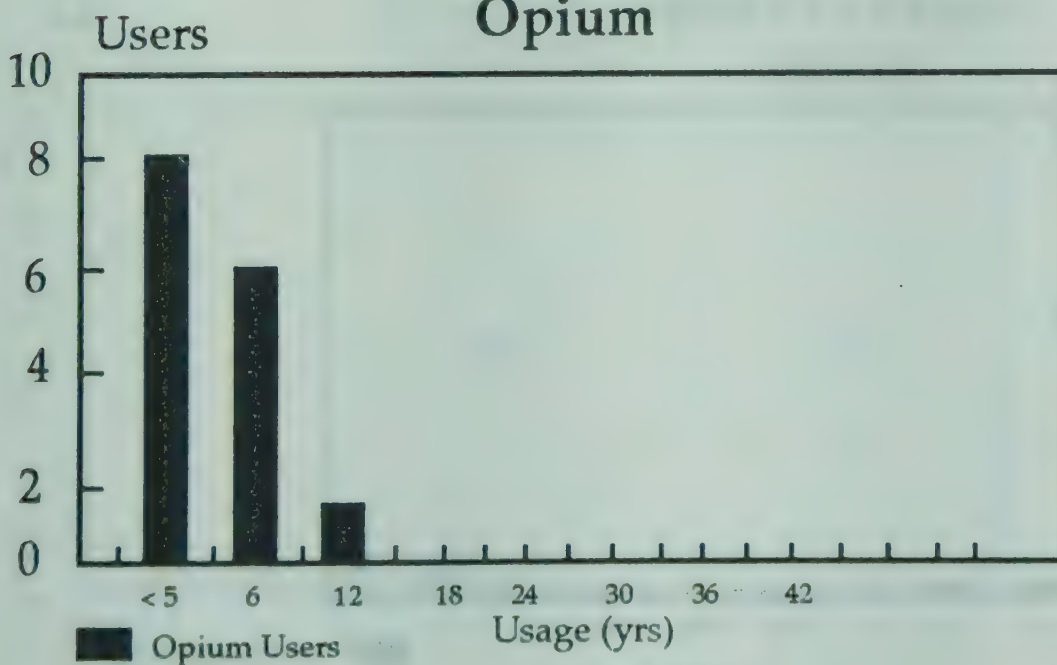
Follow-up of Users (Total)

38



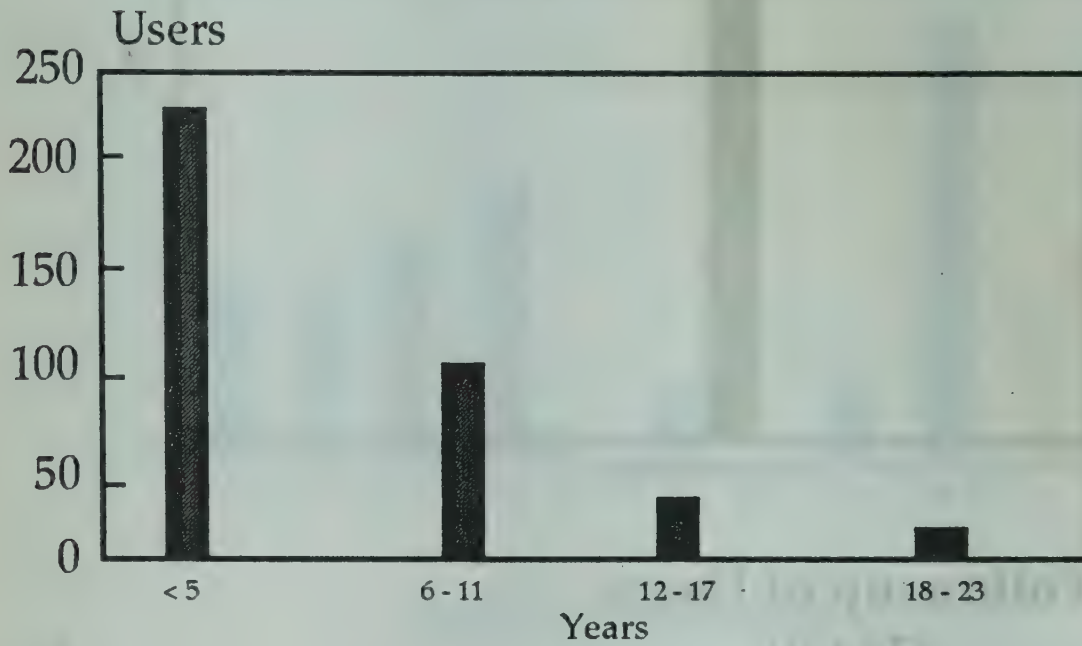
Length of Usage Opium

39



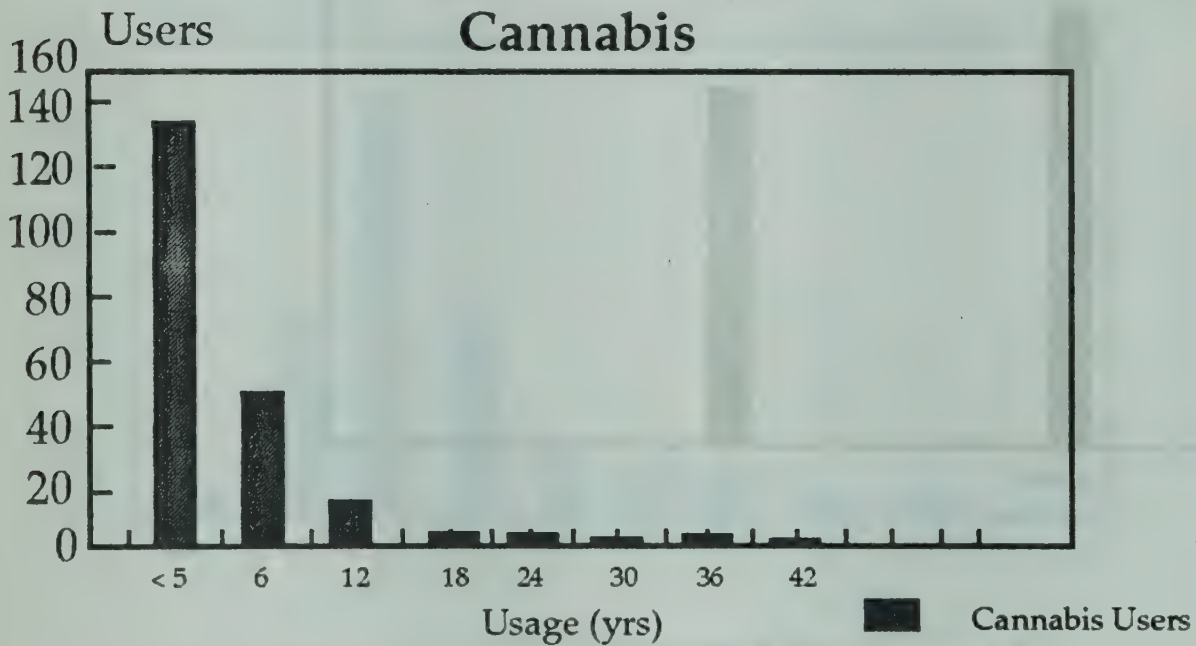
Length of Usage Multiple Drugs

40



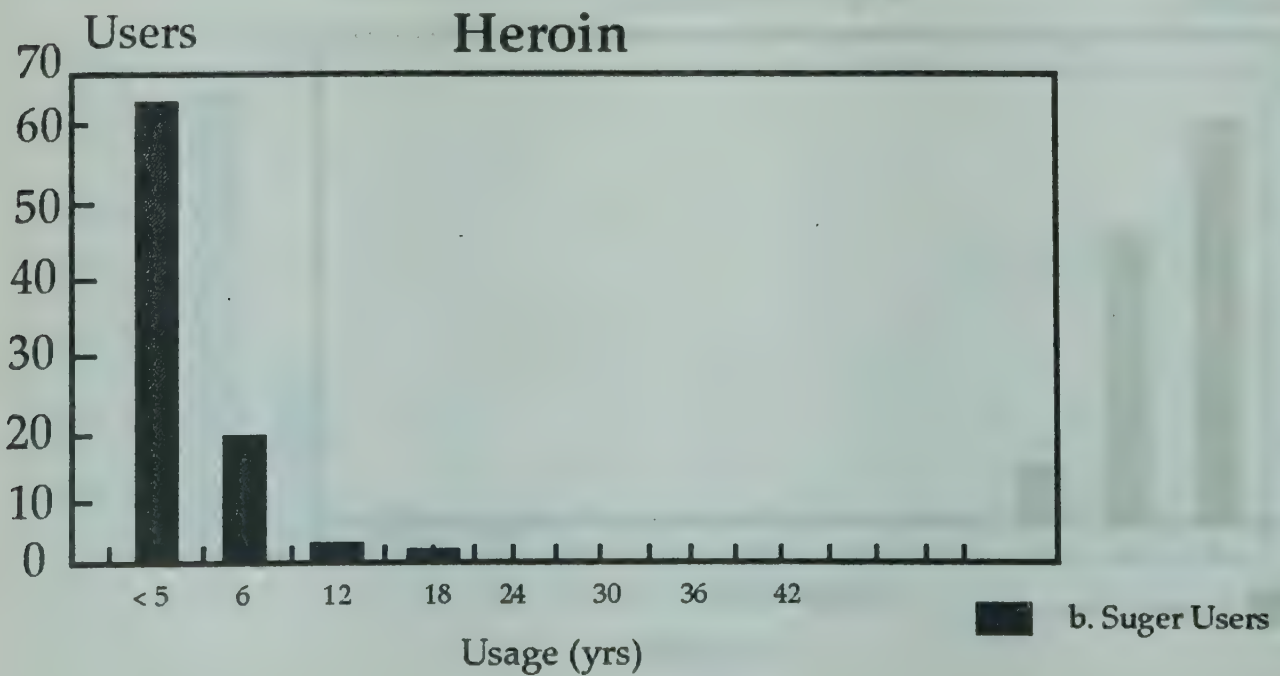
Length of Usage Cannabis

41



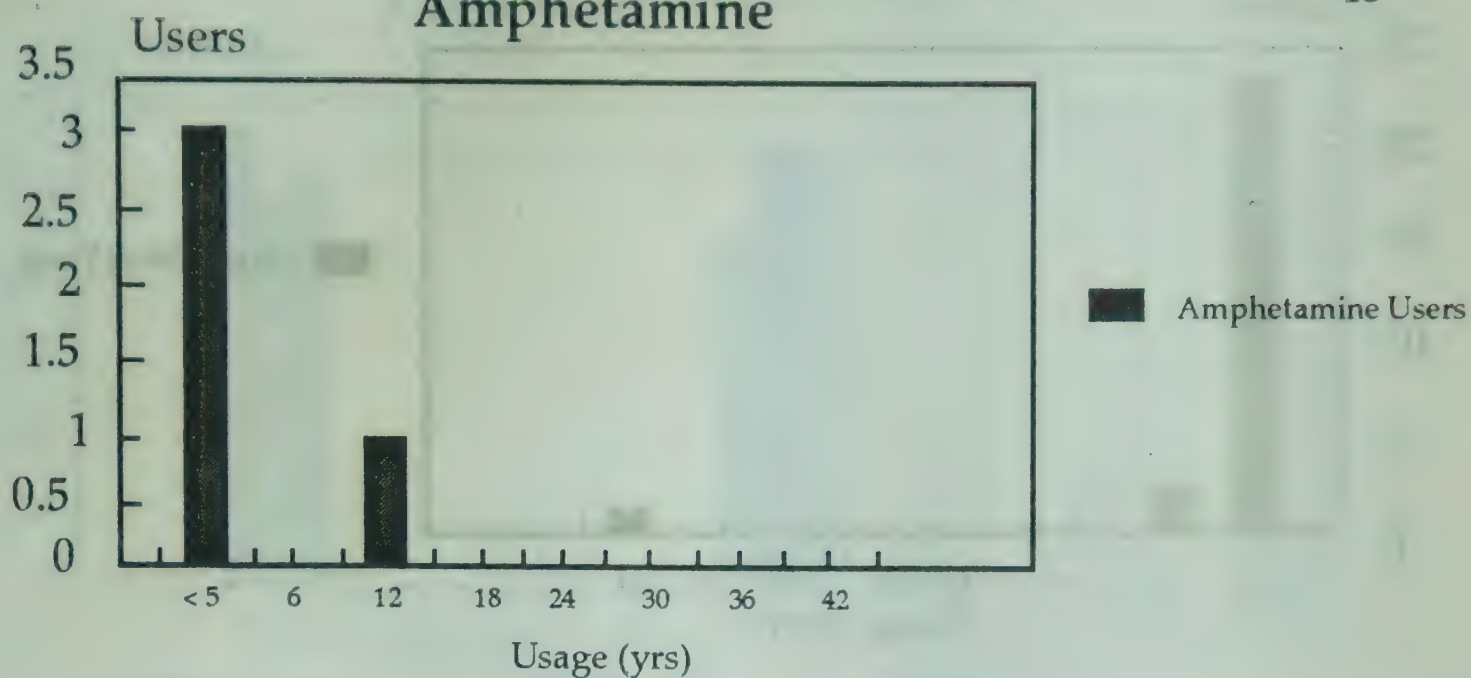
Length of Usage Heroin

42



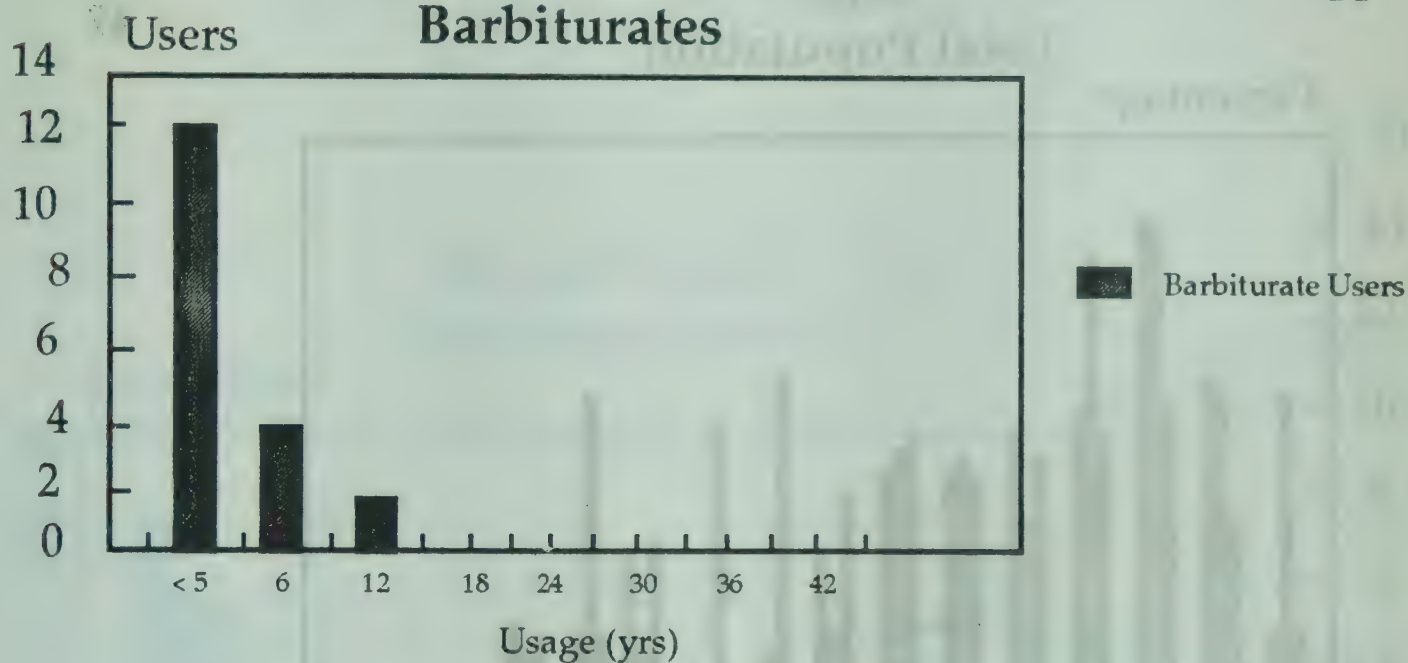
Length of Usage Amphetamine

43



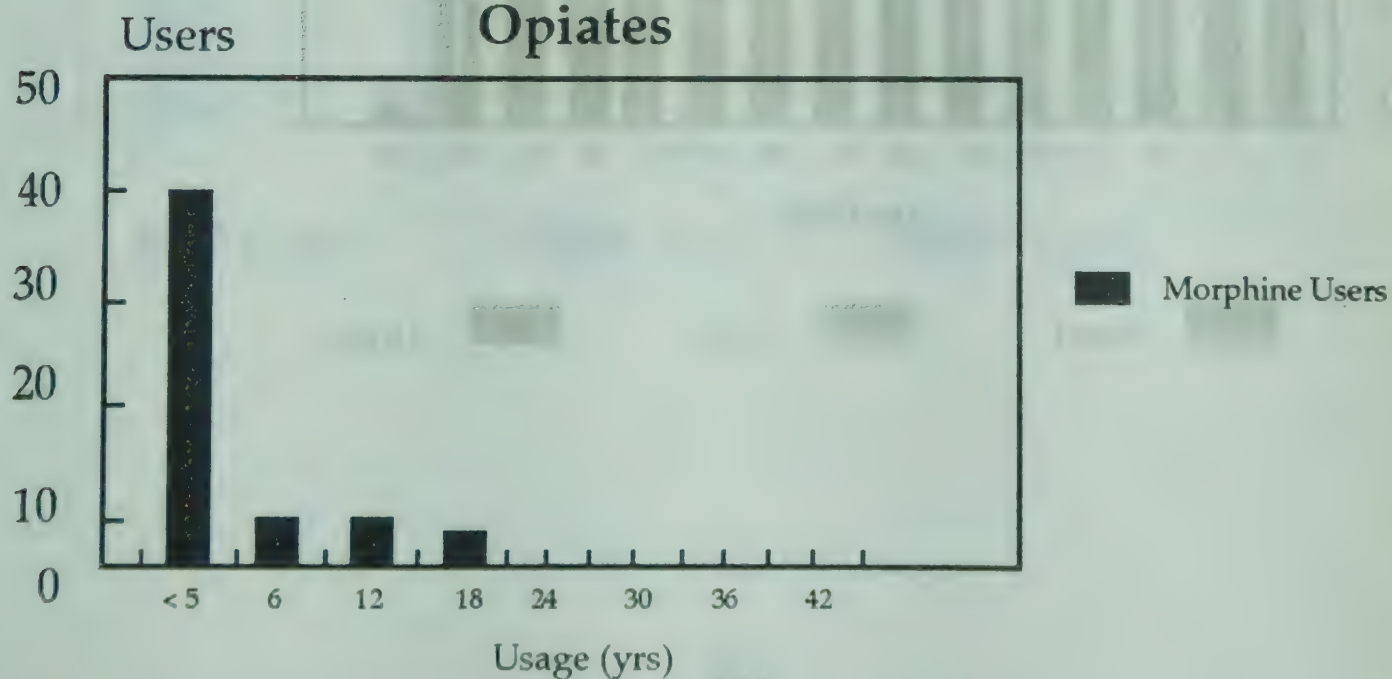
Length of Usage Barbiturates

44



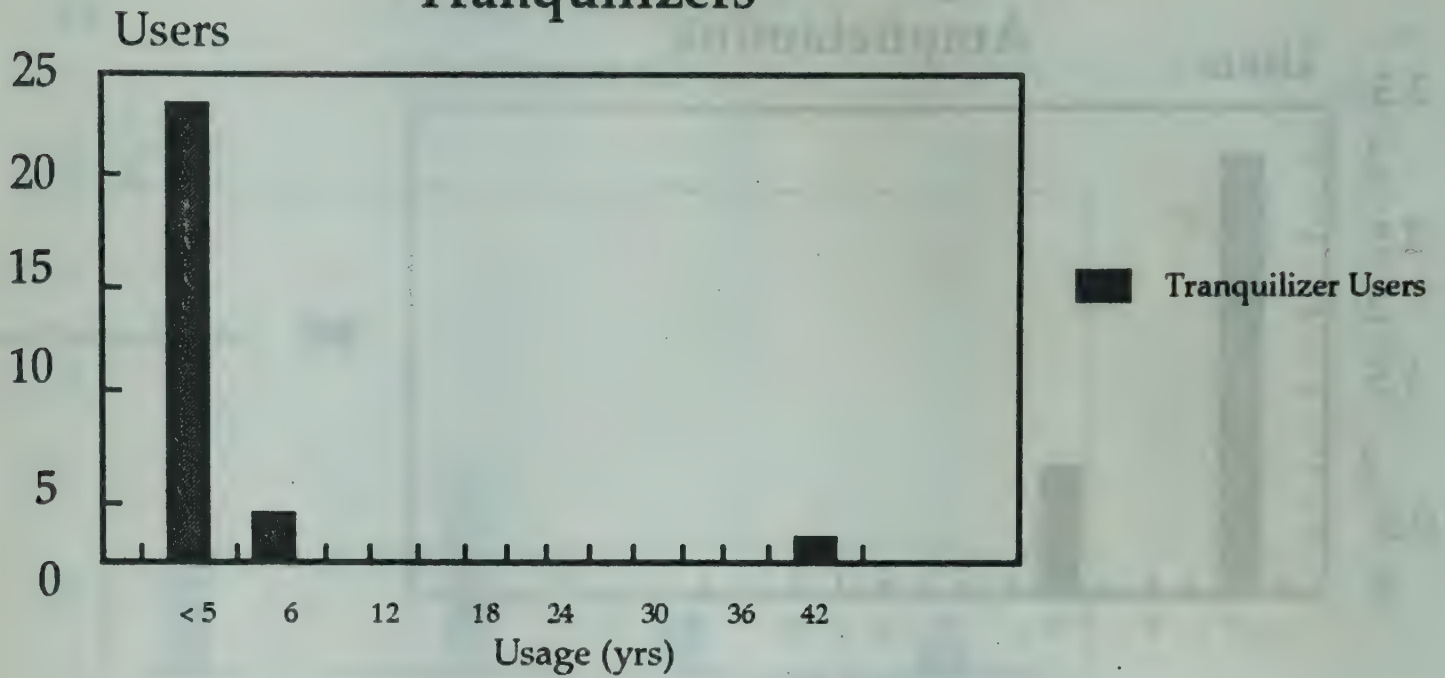
Length of Usage Opiates

45



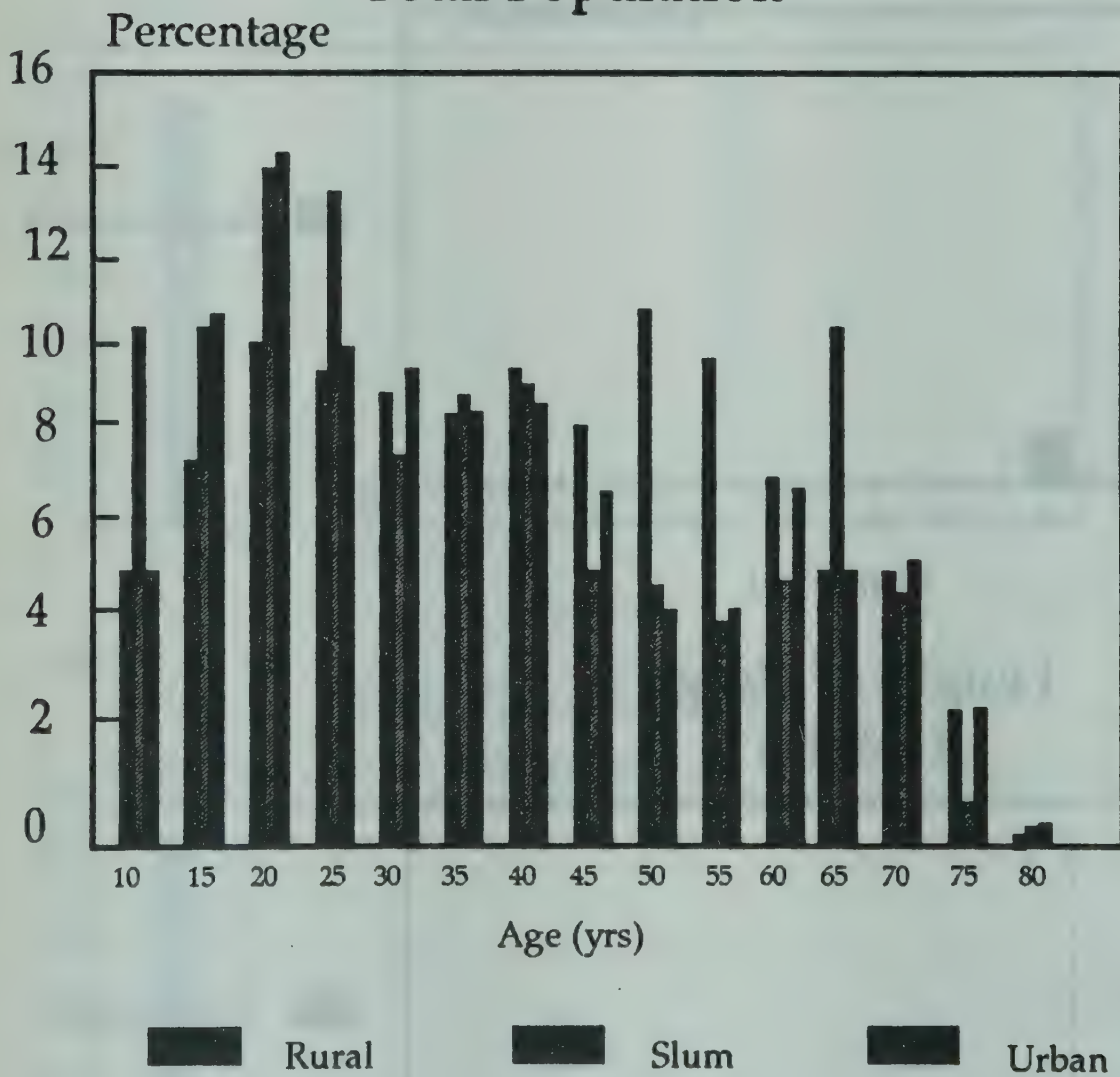
Length of Usage Tranquilizers

46



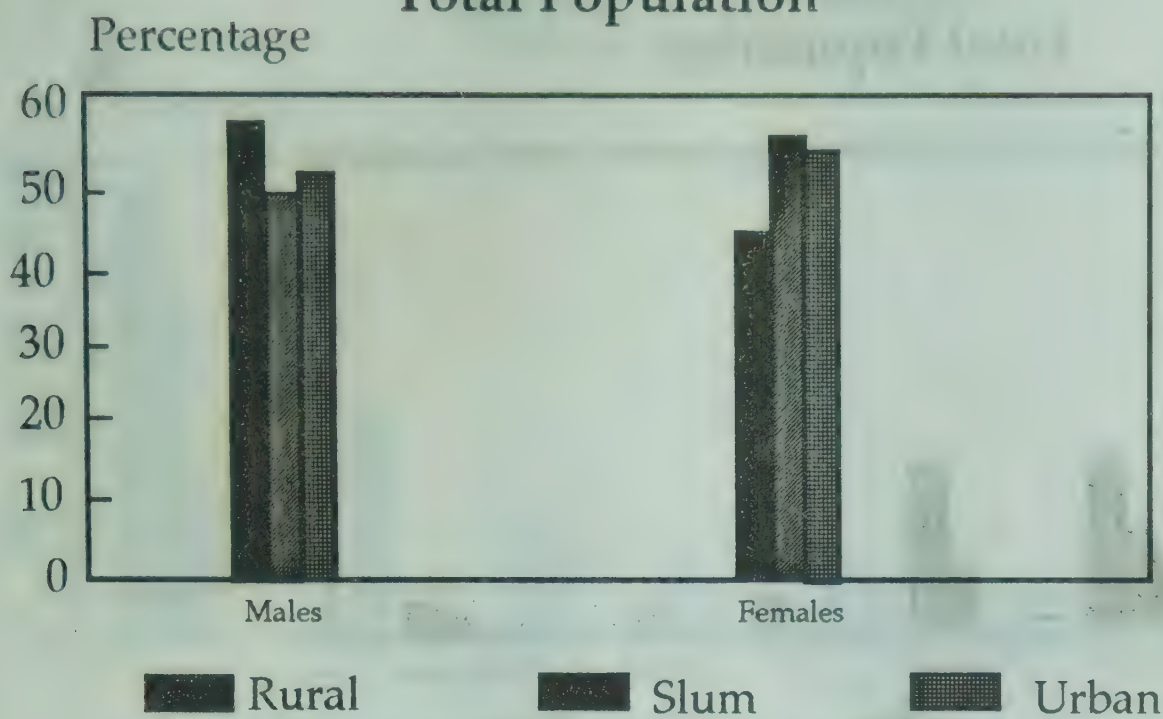
Age Total Population

47



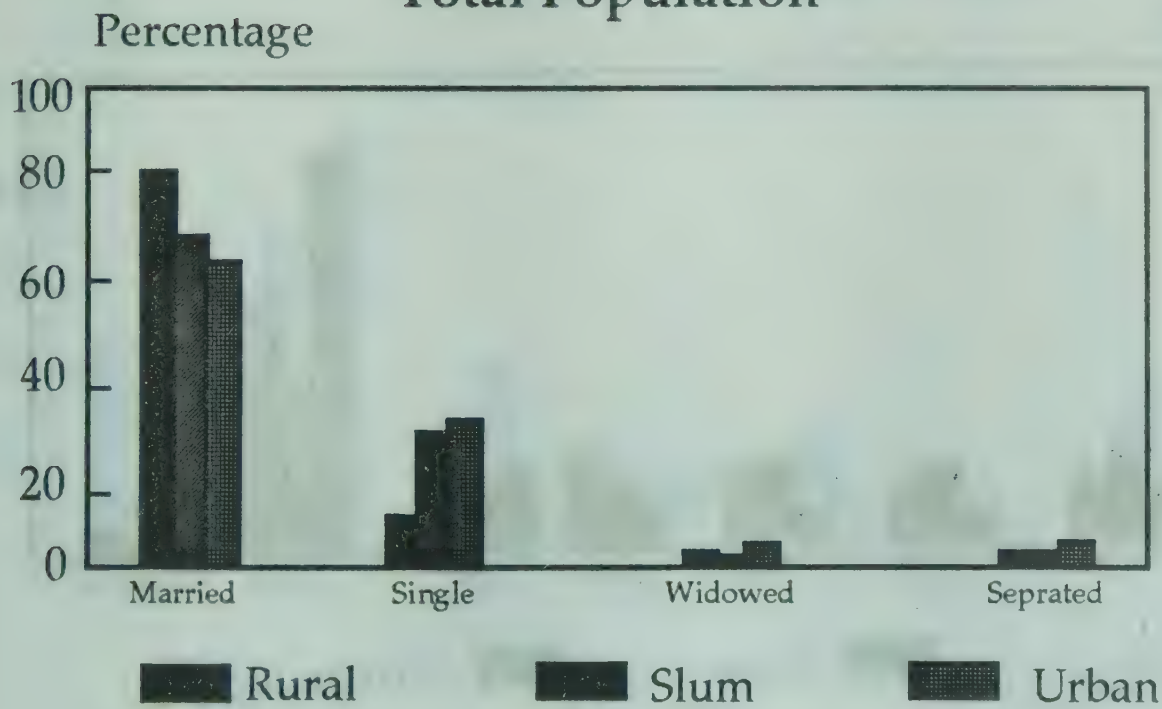
Sex Distribution Total Population

48



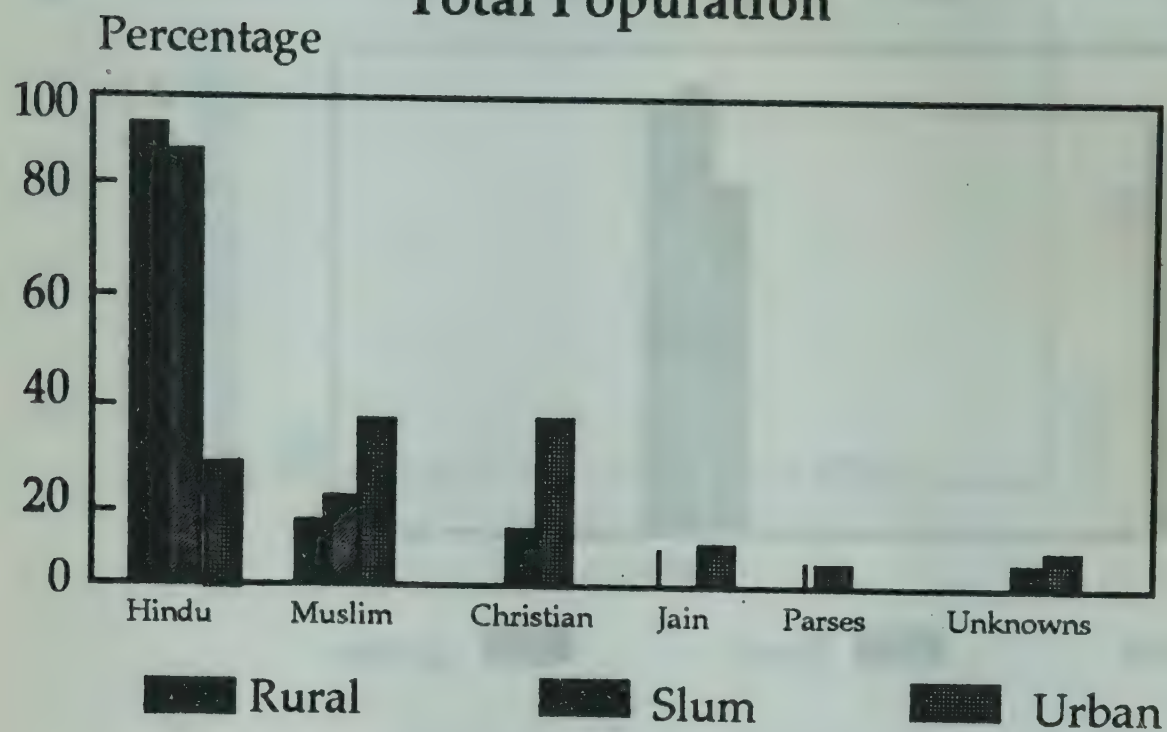
Marital Status Total Population

49



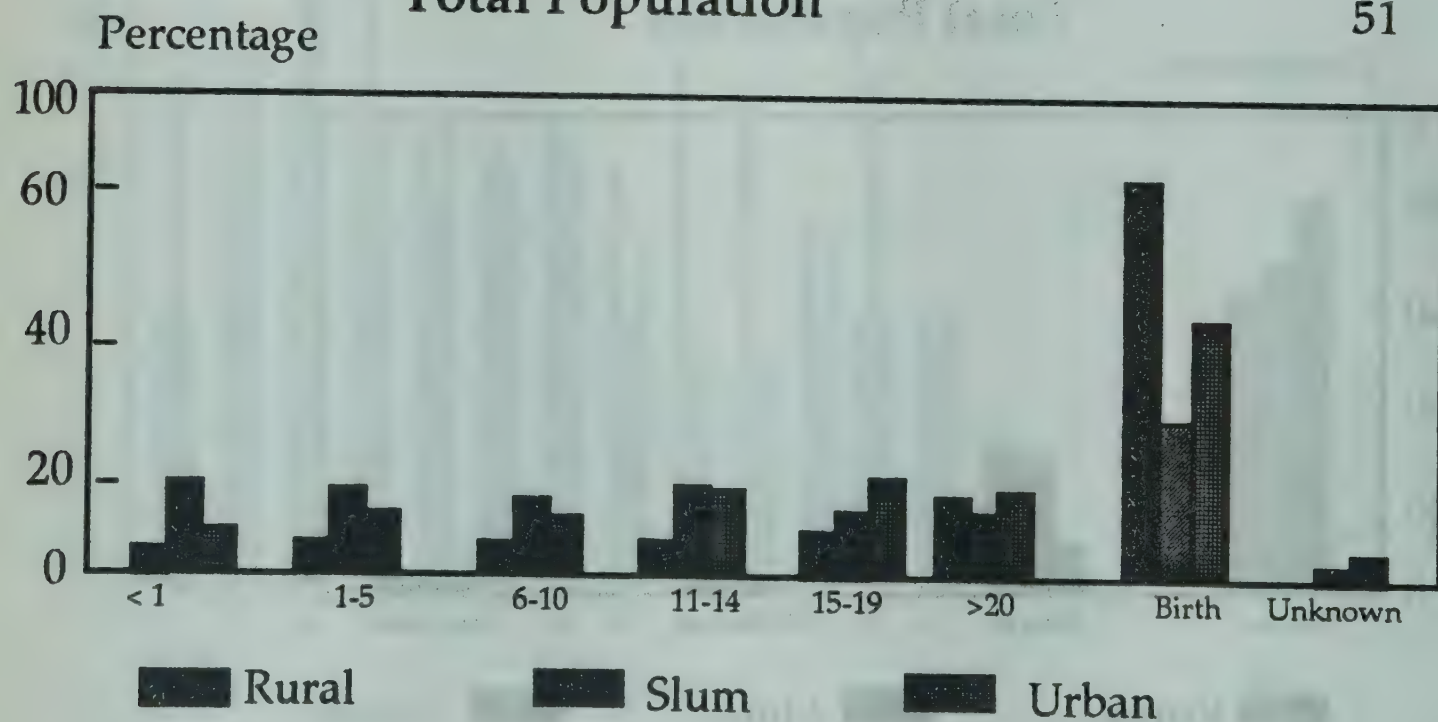
Religion Total Population

50



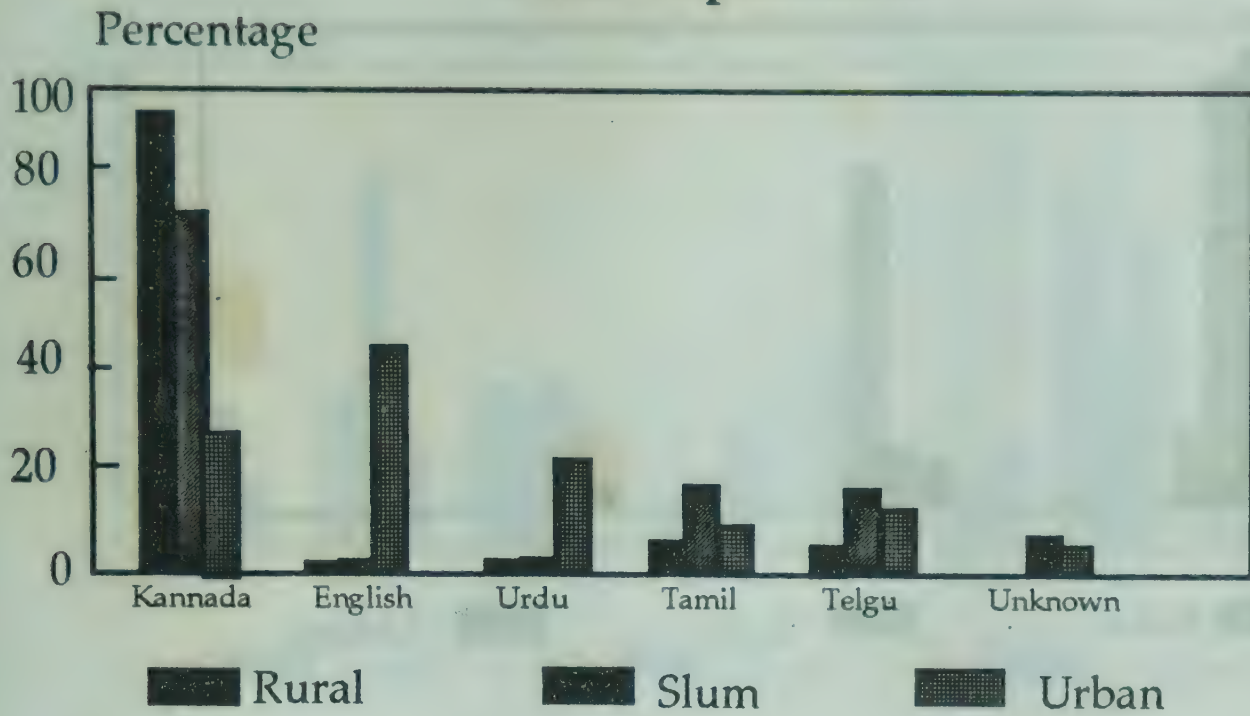
Length of stay Total Population

51



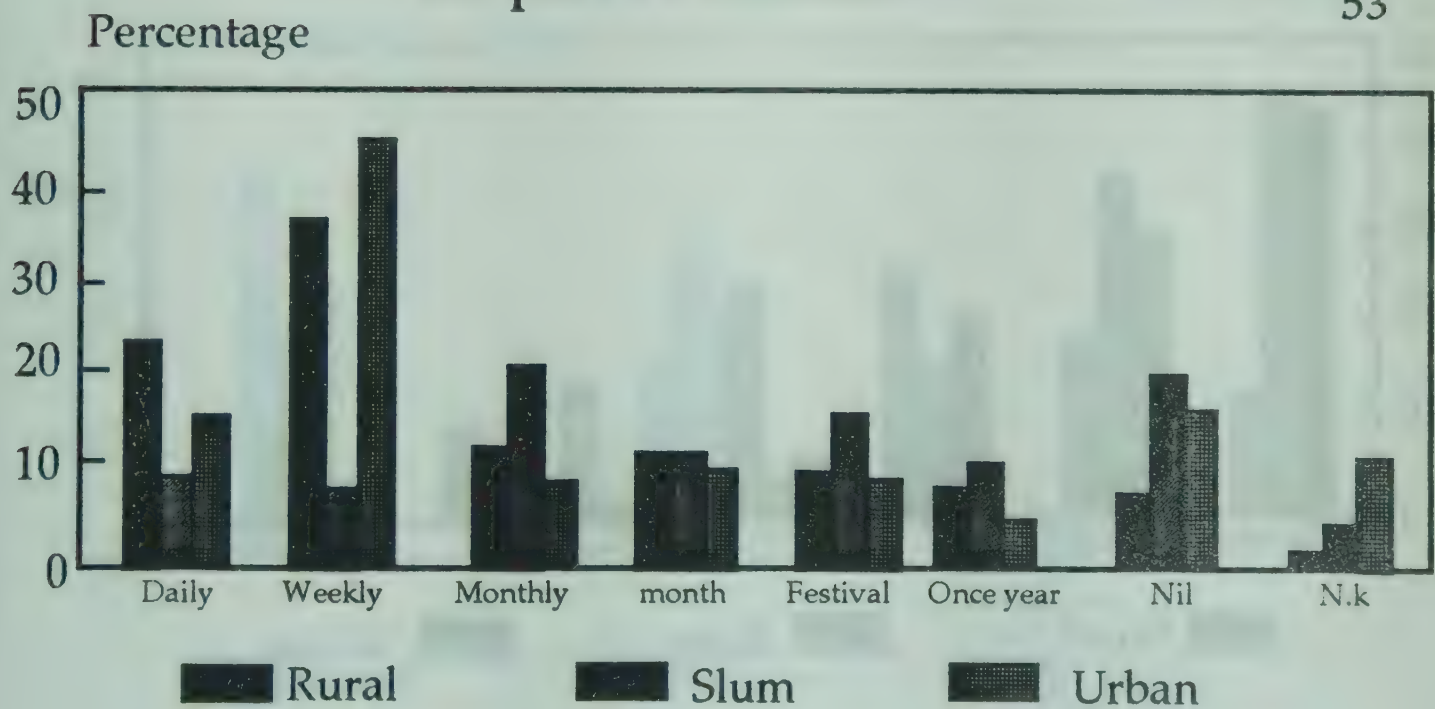
Medium of Instruct. Total Population

52



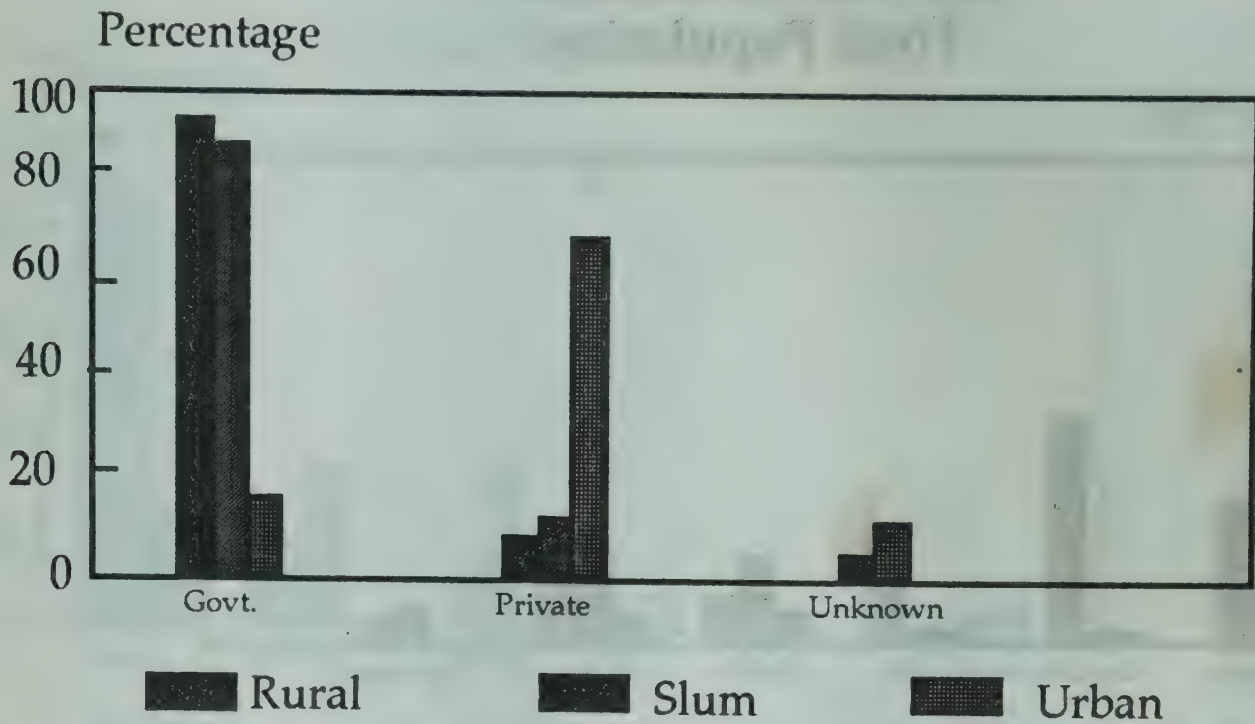
Religious Activity in the past 12 months

53



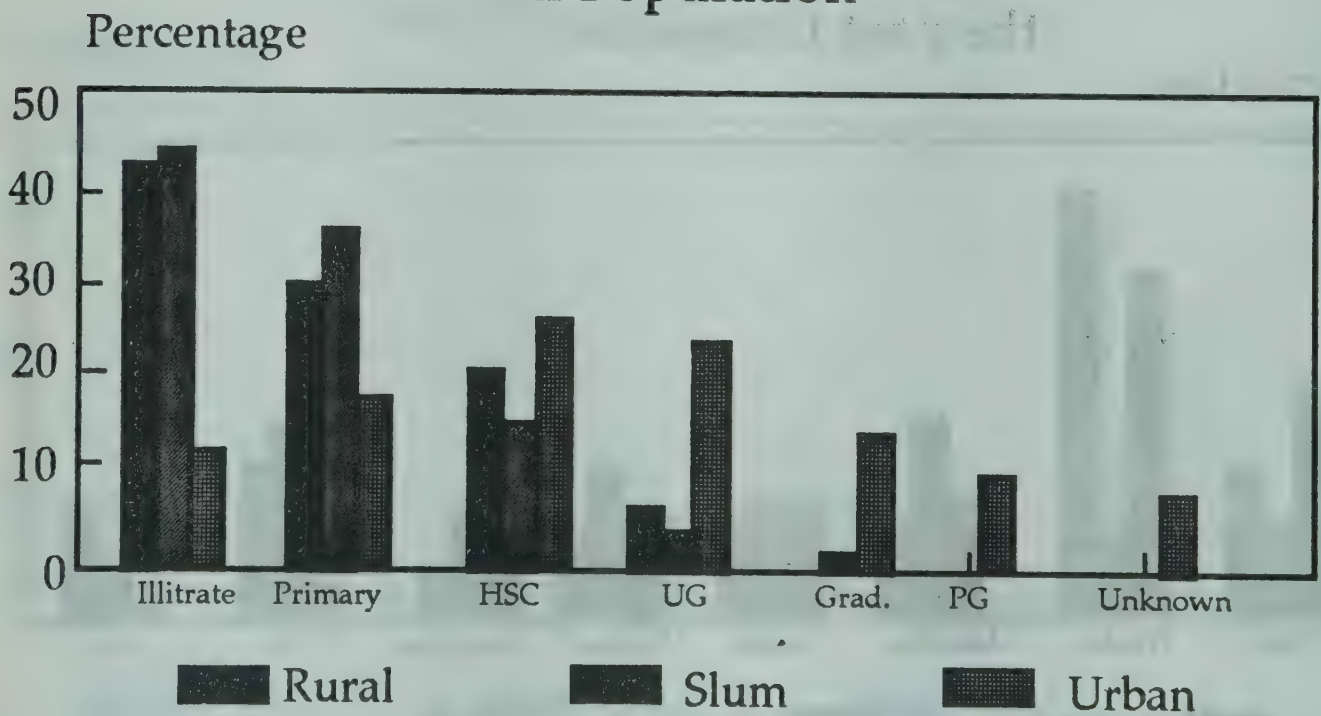
Type of School attended

54



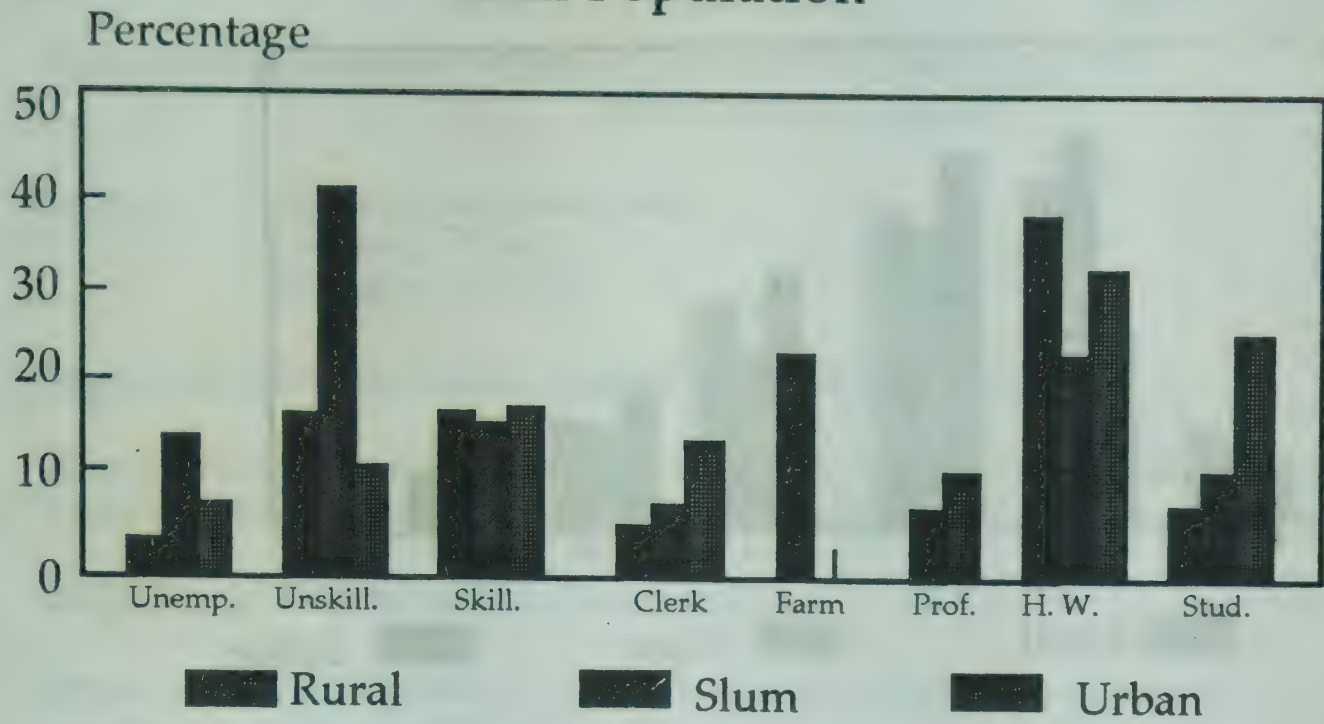
Education levels Total Population

55



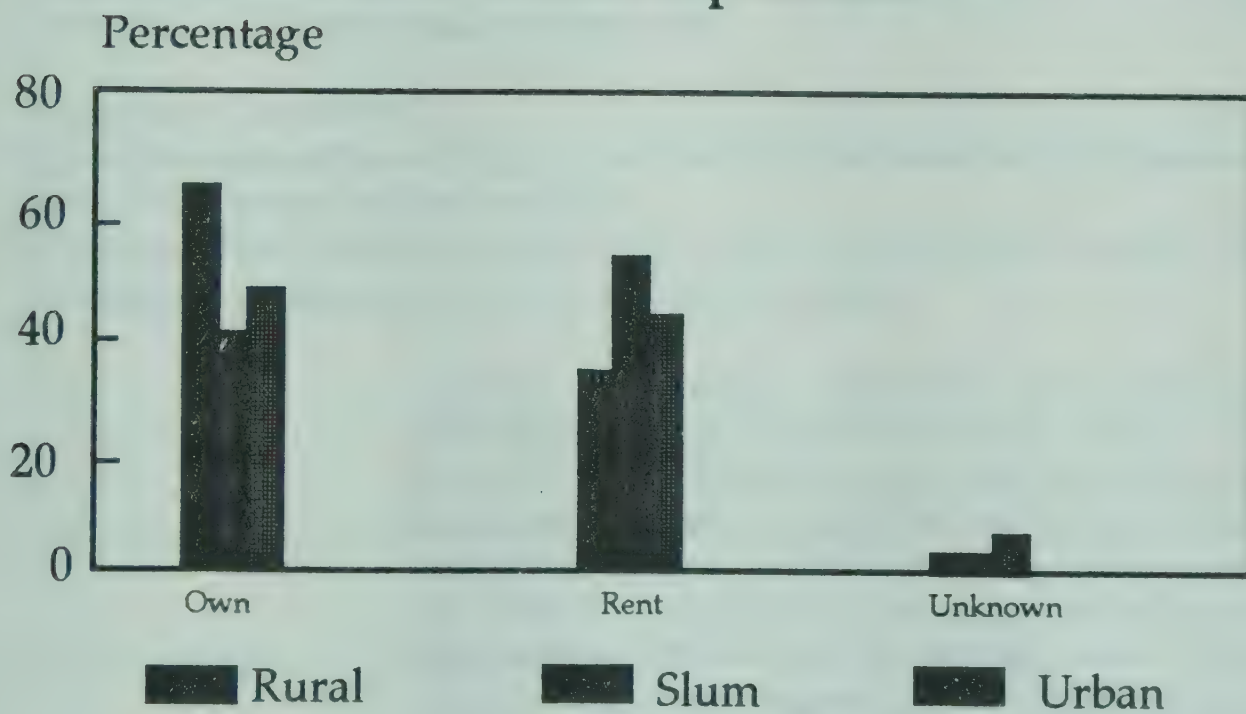
Occupational Status Total Population

56



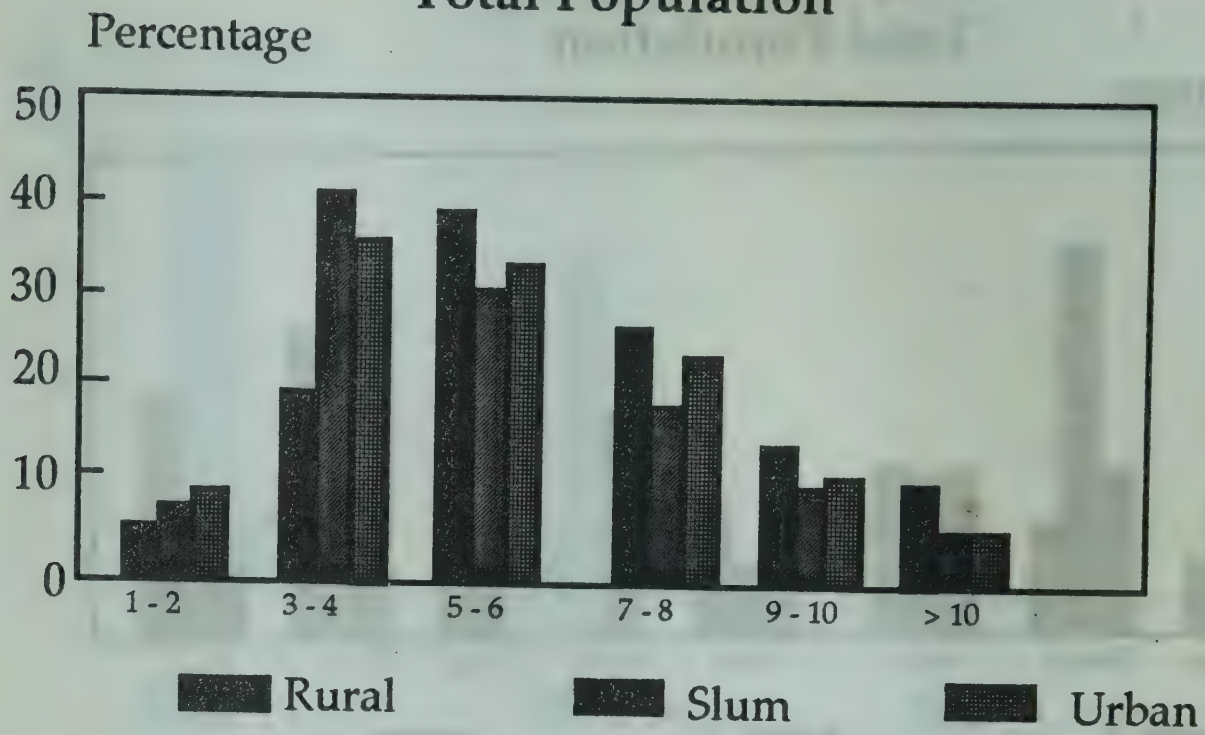
Housing Total Population

57



Family Size Total Population

58



APPENDIX - 3

Details of demand reduction centres as reported by the person-in-charge

1. Name of the programme: CHEMICAL ADDICTION INFORMATION MONITORING (CAIM)
2. Address: 12 Km. Bannerghatta Road,
Hulimavu Village
Bangalore - 560 076.
3. Region: Bangalore but addicts from all over India are also admitted.
4. Nature of the programme: Education/Community development/Crisis intervention/
Treatment Rehabilitation/After care/Family Therapy
5. Target group: Addicts, families and employers
6. Objectives of the programme: To restore the chemically dependent person and their family members, to optimal health and functioning of body, mind, emotion, spirit (values) and relationships.
7. Rationale: Belief in the principles of recovery rather than the personalities in recovery, and that the collective conscience of the whole group is alone responsible on a daily basis for maintaining the sobriety of its members.
8. Model of Adaptation: Social Model - using the concept of a therapeutic community. Alcoholic Anonymous - 12 steps centered programme.
9. Programme Description:
 - a) Education, information and referral services. They hold seminars for the general community, professional groups and organisations.
 - b) Treatment: Treatment is an intensive and extensive 12 step centered service. The centre offers an inpatient programme as well as outpatient services.

Inpatient programme - Treatment can extend upto a year. The patients go through detoxification and therapy, which includes, group therapy, counselling, yoga and meditation, family therapy and games. Patients are taught about the disease and helped make attitudinal changes, to identify, clarify and express feelings. They are helped to surrender and accept the disease of chemical dependency. They learn to identify what personality and character traits are responsible for chemical dependency and to restore healthy relationships. This is followed by an effective long term programme of recovery.

Staff:

Professional : Psychiatrist, psychologist, yoga instructor, social worker, physician

Para professional: Recovered addicts, counsellors and 4 trainee counsellors

1.Name of the programme: CHETANA (Anti Drug Action)

2.Address - Bosco Yuvadaya,
91, B Street, 6th Cross, Gandhinagar
Bangalore.

3.Region - Bangalore

The centre has bifurcated Bangalore area into 3 - each under a different person who walks the streets in search of street children.

4.Nature of the programme: Community development/ treatment/rehabilitation/social re-integration.

5.Types of drugs: Cannabis, petrol and glue sniffing.

6. Target group : Street children (rag pickers) of Bangalore. Most of these children have come from rural areas of Karnataka and Tamilnadu to Bangalore. All are male, ranging in age from 15 to 25 years. The shift of culture from rural to urban and the sudden exposure to city life make the children go in search of all forms of entertainment and euphoria. Education levels vary from illiteracy to pre-university.

7. Objectives of the programme:

- a) To help the children back into the mainstream of society.
- b) To re-integrate the children with their families or atleast get them to visit their families.

8. Rationale: To offer services to street children in need and to provide treatment aimed at a drug free lifestyle. To develop self esteem and to help them back into the mainstream of life.

The centre focusses on 3 areas in their anti-drug action programme:

- a) Demand Reduction b) supply reduction and c) building a network with the government, police, social welfare agencies etc..

9.Model of adaptation:Original

10.Programme Description:

- a) **Contact** - Made by the Brothers of the Siletian Congregation by walking the streets and through peer groups
- b) **Building Relationships**: The Siletian Congregation maintain "shelters" for street children. This helps in building relationship based on trust and confidence.
- c) **Maintaining trust and confidence.**
- d) **Data collection** - Data about the addicts is collected - their home environment, personality traits, education, present habits, etc.
- e) **Motivation** - for change.
- f) **Guidance and counselling**: To make a choice -
 - (i) to go home
 - (ii) to attend the camp for treatment and therapy
 - (iii) to remain on the street.
- g) **Treatment** - is mainly in the form of camps, generally of a months duration and held away from the city.

The 4 fold treatment programme consists of:- detoxification, building vitality, value clarification/ personality development and vocational orientation.

h. Rehabilitation:

1. The boys are motivated to return home
2. Admission to vocational courses
3. Jobs are arranged.

1. Name of the programme - CENTRE for RESEARCH EDUCATION SERVICE AND TRAINING (CREST)
2. Address - 71, North Road,
St. Thomas Town,
Bangalore - 560 084.
3. Region - Bangalore - mainly catering to Banaswadi, Kammanahalli and Frazer Town.
4. Nature of the programme: Prevention (information and education) Counselling Training / Counselling / Post treatment counselling / Community Awareness.
5. Target Group: Youth, students, slum dwellers, employers, educators and families.
6. Objectives:
 - (i) Spread awareness of the drug menace, giving correct information about its insidious spread and harmful consequences especially to youth.
 - (ii) To develop positive attitudes in youth so that they develop a stable personality and the courage to say "no" to drugs.
 - (iii) To help parents and teachers acquire the skills in Preventive counselling and educate them with adequate information regarding substance abuse and involve them in the fight against addiction in youth.
7. Rationale: CREST was granted a project for counselling in Drug addiction and alcoholism in February 1989 by the Ministry of Welfare - Government of India. This programme aims at training persons to make them expert educators in Preventive counselling. This includes special training toward motivating youth and reinforcing family values to develop a sound personality with right skills for establishing stable and healthy relationship in the home, school, college and community.
8. Model of adaptation: The causes for Drug addiction were identified and the programmes cater to these aspects which are peer pressure, poor family relationships and psychiatric causes. The programme also lays emphasis on maintaining Indian traditions and values and maintaining a cultural balance.
9. Programme Description: Drug Education and Counselling Training Module. The Training Module consists of 2 components: a) Preventive Education and (b) skills training which forms the syllabus for preventive counselling.

Staff: The group consists of experts, social workers, psychiatrists, counsellors and co-operators.

1. Name of the programme : **FREEDOM FOUNDATION**
 2. Address: 9/30, Karamchand Layout, Lingarajpuram, Bangalore.
 3. Region: Bangalore
 4. Nature of the programme: Education/information/Treatment/Rehabilitation/Family Intervention and help/Employee Assistance Programme/Self Help Meetings.
 5. Target group - Addicts, family, employers, students, high risk groups.
 6. Objectives:
 1. Chemical Dependency Services — to address the many problems which can arise in the lives of chemically dependent individuals, their families and the community at large.
 2. Chemical Dependency Recovery Services to help chemically dependent individuals establish total abstinence from psychoactive substances.to assist them and their families develop and maintain a holistic healthier and more functional lifestyle.
 7. Rationale: Chemical Dependency is treatable.
 8. Model of Adaptation: 12 step centred service of Alcoholic Anonymous and Narcotic Anonymous.
 9. Programme Description:
 - a. Education / Information : - workshops with audio-visual aids held in educational institutions, Rotary Clubs, and for the police.
 - b. Treatment : - Includes out patient as well as inpatient family and self help programmes. The inpatient programmes include besides detoxification, individual and group counselling, didactic educational sessions, introduction to the 12 step self help programmes and family therapy.
- Employee Assistance Programmes - at factories, business establishments.
- Staff: Treatment is provided by a multidisciplinary team consisting of physicians, counsellors and consultants representing other disciplines.

1. Name: HOPE - Anti-addiction Action Group
2. Address: Hope Claretian Seminary
28/12, 18th Cross Road,
Malleswaram West,
Bangalore - 560 055.
3. Region: Bangalore
4. Nature of the Programme: Information/Education/Documentation
5. Target Group: Students/youth groups/parents and teachers
6. Objectives: Prevention/Awareness
7. Rationale : Education on substance abuse must begin with attitude changes. Therefore this group, through information and educational programmes, tries to bring about proper attitudes towards the problem and towards drug addicts.
8. Model of adaptation: None
9. Programme description: Promotion of a healthy drug free lifestyle through different approaches.

A.Information - 23 schools in Bangalore have joined the programme. The programmes include - Seminars for teachers, Workshops for students, film presentations and a series of competitions held in groups of schools on drug abuse. The competitions are in the nature of essays, skits, debates, drawing, etc.

B.Surveys and Publications - Surveys on the problem of drug abuse are conducted in different parts of India. The results of the survey are then published in booklet form.

C.Documentation Centre - Information from various newspapers and magazines are collected.

1. Name: The Lions Drug Awareness Programme
2. Address: Lions Club, Bangalore.
3. Region: Bangalore
4. Nature of the programme: Information/Education - Public Awareness/ Community development.
5. Target group: The drug awareness programme reaches all members of society while concentrating on those who are most seriously affected by drug abuse - young people.
6. Objectives: To work toward the elimination of drug and alcohol abuse.
7. Rationale: The belief that once people understand the health hazards of drug use, they will be more likely to adopt responsible attitudes toward drugs. Therefore the Lions, Lionesses and Leos can become part of the solution to the problem.
8. Programme Description: Lions, Lionesses and Leos are involved in exerting influence on people with drug problems, through leadership in creating awareness, in parent-teacher groups, community awareness projects and student education. The Leo cubs are also entrusted for support - because of their age and their potential effectiveness in exerting a positive influence on their peers.

Other Programmes: are geared towards developing self awareness and self confidence in adolescents.

- 1) Quest skills for Adolescence geared towards developing self-awareness and self esteem while teaching young people how to set goals and make responsible decisions.

The programme includes the following components:

- a) Classroom activities b) Parent involvement c) Community involvement
- 2) Public Awareness Programmes:
 - a) Sponsoring poster contests
 - b) Arranging speakers for presentations
 - c) Holding seminars or panel discussions featuring local resource persons.
 - d) Communicating drug awareness through pamphlets, radio/T.V. spots,
 - e) Contacting Law Enforcement agencies
 - f) Making resources available from Lions Club International.

1. Name: ALCOHOL and DRUG DEPENDENCY TREATMENT PROGRAMME.
2. Address: St. John's Medical College Hospital
Dept. of Psychiatry
Bangalore.
3. Region: Bangalore
4. Nature of the Programme - Education/Crisis Intervention/Treatment/ Rehabilitation.
5. Target group: Addicts who come to the hospital for treatment.
6. Objectives: - early treatment
- to minimise damage due to drugs
- social rehabilitation.
7. Rationale: - guiding principle is to limit and minimise damage, hence the use of medical, sociological and psychological inputs.
8. Model of adaptation: - Medical Model
9. Programme Description: - The treatment/rehabilitation facilities are comprised of
 - outpatient clinic
 - inpatient service consists of:
 - (i) detoxification
 - (ii) physical treatment
 - (iii) group therapy
 - (iv) aversive therapy
 - (v) psychotherapy.
 - (vi) family therapy

The team also participates in education programmes which consists of talks, workshops and panel discussions at schools/colleges and wherever else invited.

1. Name: Deaddiction Unit -National Institute of Mental Health and Neurosciences (NIMHANS)
2. Address: NIMHANS
Hosur Road
Bangalore.
3. Region: Bangalore
4. Nature of the Programme - Education/Counselling/ Crisis Intervention / Treatment/ Rehabilitation/ Community Awareness/ Training.
5. Target group: Alcoholics, drug abusers and their relatives
6. Objectives: - early treatment
- to achieve longterm abstinence
7. Rationale: - The guiding principle is to limit and minimise damage, hence the use of medical, sociological and psychological inputs.
8. Model of adaptation: - Biopsychosocial Model
9. Programme Description: - The treatment/rehabilitation facilities are comprised of
 - outpatient clinic
 - inpatient service consists of:
 - (i) detoxification
 - (ii) counselling
 - (iii) group therapy
 - (iv) Disulfuram/ Behaviour therapy
 - (v) Occupational therapy
 - (vi) Weekly family group meetings.

The centre runs a weekly clinic for drug dependence at Divya Shanti, Lingarajapuram. Training courses for medical officers and counsellors, health education programmes for governmental organizations, public and private sector agencies, and voluntary agencies are also conducted.

Staff: A multidisciplinary team consisting of psychiatrists, clinical psychologists and social workers.

1. Name: SPARSHA - Short Stay Home for Addicts.
2. Address: 290, 37 B Cross,
26th Main - 9th Block,
Jayanagar, Bangalore - 560 069.
3. Region: Bangalore
4. Nature of programme: Information / Education / crisis intervention / Treatment
5. Characteristics of users: Mainly the late teenage group, urban, male, students or drop outs coming from higher middle class and middle class homes.
6. Objectives: To socialize the addicts - to bring about a personality change and to help them live in society.
7. Rationale: To offer services to people in need and to provide treatment aimed at a drug free lifestyle.
8. Model of adaptation: None - mainly formulated on experience of being a Psychiatric Social Worker - Psycho Social Model.
9. Programme description:
 1. Information/Education: Talks, workshops and seminars are conducted in schools / colleges.
 2. Treatment: Consists of 2 facets:
 1. Psychotherapy
 2. Family Therapy / Yoga / Meditation / Group sessions / Self Expression sessions

Family therapy - is aimed at joining and restructuring the family system - immediate family members visit the centre once a week. Apart from the therapeutic sessions - families are also taught how to interact with the patients after discharge. Help is provided in structuring of a timetable to bring in routine.

Staff: The centre was inaugurated in March, 1993. The staff consists of:

- Psychiatric Social Worker
- Psychiatrist
- Medical doctor
- Student Volunteers
- Assistant
- Cook

1. Name: Serenity Counselling Centre
2. Address: 77, Charles Campbell Road,
Cox Town,
Bangalore - 560 005.
3. Region: Bangalore
4. Nature of programme: Education / Counselling / Community awareness / Training / Documentation
5. Target Group: Alcoholics, drug abusers and their relatives
6. Objectives: To offer services to people who require counselling for alcohol, drug abuse, marriage and other family problems.
7. Rationale: To offer counseling to people in need of psychological help.
8. Model of adaptation: Psycho-social model, including the Twelve-step programme of Alcoholics Anonymous.
9. Programme description: After detoxification, the patient receives spiritual therapy based on the concept of "I have come from God, and I will go back to God". The patient receives, besides counselling, music and occupational therapy. Patients and their relatives are encouraged to attend Alcoholic Anonymous and Al Anon Meetings.

1. Name: TOTAL RESPONSE to ALCOHOL and DRUG ABUSE (TRADA).
 2. Address: TRADA Deaddiction and Counselling Centre
Carmelaram P.O.
Carmelaram
Bangalore - 560 035.
 3. Region: Bangalore - Trada has other centres in Karnataka and Kerala.
 4. Nature of the programme : Treatment \ Follow up\ Rehabilitation\
Training\Publications\Research
 5. Target Group: Addicts, family and anyone interested in training to be counsellors
 6. Objectives: To enable the patient and the family to adjust to a new life style, to face new responsibilities and to develop strengthened relationships.
 7. Rationale: TRADA is an offshoot of a combined programme of different Christian denominations in India - The Joint Christian Temperance Movement supported by the Christian Bishops of Kerala. It is a non-profit, government supported organisation. The model recognizes that drug dependency is a family illness and is treatable.
 8. Model of adaptation: Minnesota, Hazelden Model of Treatment.
 9. Programme Description:
 - a) Treatment: Detoxification and multidisciplinary therapy which include individual counselling, family counselling, group therapy, discussions, aversion therapy, grief therapy, games and occupational therapy, yoga, vipassana meditation, pranic healing and prayer therapy
 - b) After care services (Follow up) which includes attendance at N.A and Alanon meetings and regular counselling and follow up.
- Staff - Administrator - Manager 3 counsellors - Psychiatrist
 Jr. Doctor - Psychiatrist Nurse
 A.N.M. Nurses - Clerical staff
 Ward boy - Cook
 Gardener - Housekeeping
 MSW staff for field work

APPENDIX - 4

ANNOTATED BIBLIOGRAPHY

Adityanjee, Mohan, D., Saxena, S.: Heroin dependence: The New Delhi Experience. *Indian Journal of Psychiatry* (1984), 26(4), 312-316.

Sociodemographic and clinical profile of first one hundred and five patients attending a de-addiction clinic of New Delhi for heroin dependence is presented. It reveals a sudden rise of heroin use in young educated males, probably because of its easy availability and its decreasing prices in the last few years. This trend is likely to be discovered in the other metropolitan cities of India as well need for strengthening of preventive, curative and rehabilitative services is emphasized.

Agarwal, R.K., Puliyel, J.M., Chansoria, M., Mukerjee, B., and Kaul, K.K.: Comparative study of the personality correlates and nature of drug abuse in schools and colleges. *Indian Journal of Pediatrics* 49:1982: 671-679.

634 school boys and 777 college students (365 boys and 412 girls) between ages 14 and 19 were surveyed to identify drug abusers. To those identified as drug abusers and to an equal number of matching controls The High School Personality Questionnaire of Cattell was administered. The data on drug abuse and personality was analysed. The prevalence of drug abuse in schools and college boys and girls has been analysed separately and also the nature and frequency of the drugs abused. The personality correlates of school boys and college students were analysed separately subsequently by a step wise multiple regression analysis. Personality correlates with the greatest predictive ability in determining drug use were selected and predictive models are worked out using the 'F' statistics.

Agarwal, A.K., Sethi, B.B., and Gupta, S.C.: Physical and Cognitive Effects of Chronic Bhang (Cannabis) in-take. *Indian Journal of Psychiatry* (1975) 17, 1-7.

40 subjects taking Bhang almost daily for a period of 5 years or more were evaluated for physical and cognitive disturbances. Detailed Physical examination was done and for evaluation of cognitive functions, WMS, Bhatia's Battery of intelligence and BGT were administered. Physical evaluation on the sample did not reveal any abnormality. In majority of cases (82.5%) no evidence of memory disturbance was found. About 1/4th of these subjects had shown evidence of mild Intellectual impairment (IQ below 90). BGT has shown a substantial evidence of cognitive disturbances in 20%. Organic involvement could be suspected in some of these subjects.

Ahmed Habib, Ramalingam, S., Ahmed, S. Drug abuse and personality : A cross - cultural study. *Indian Journal of Clinical Psychology* (1984) March II-33-39.

The problem of non-supervised use of psychoactive substance for altering mood status, especially by student groups, is receiving increasing attention. The present study attempts to examine some of the personality characteristics of drug users in three different cultures representing India, Mauritius and U.S.A. The sample consists of 240 subjects, 80 from each of three cultural units. These include an equal number of users and non-users of the drugs, representing both the sexes. They were compared on Allport, Vernon and Lindzey's study of values and BAI. The results indicate that in most of the areas of adjustment, users differ significantly from non-users (health, home, submissiveness, emotionality and hostility). In case of value patterns, they differ on theoretical, economic aesthetic, social and religious dimensions. Sex differences have also been observed between users and non-users of drugs. Subjects from different cultures are found to differ on various dimensions of personality, but no clear pattern is observed with reference to any particular cultural group.

Ajwani, J.K.: Some psychological correlates of drug dependence. Indian Journal of Clinical Psychology (1985) March 12:23-31.

The study aims at revealing psychological correlates ie, adjustment and anxiety of diazepam dependence. Three groups (N=30 each) of diazepam misusers (25 mgs or more diazepam intake in a day), occasional users (casually or 5 to 15 mgs, daily intake on doctors prescription), and non-users, were studied for their anxiety and adjustment in respect of home, health, social emotional and school or college adjustment. Diazepam check list was also given for ascertaining the amount of diazepam intake in a day, its effects, and reasons for continuing the drug. Anxiety was found to be highest in occasional users and lowest in non-users. In general, men users were found to be comparatively better adjusted than misusers and occasional users. There were no differences between misusers and occasional users in respect of home, social and school adjustment. Occasional users had poorest health adjustment whereas the misusers had poorest emotional adjustment.

Andrade Chittarajan, Sarmah, P.L., Channabasavanna, S.M.: Psychological well being and morbidity in parents of narcotic - dependant males. Indian Journal of Psychiatry 31(2) 1989 122-127.

In the description of parental psychopathology in narcotic dependence, emphasis has hitherto, largely lain on the identification of addictogenic characteristics rather than on the identification of psychological distress. In an attempt to remedy the situation, we compared the parents of 21 male narcotic dependant patients with an equal number of matched controls. Using the General Health Questionnaire and the Subjective Well Being Inventory, we found the 'narcotic parents' experienced more psychological distress than did controls, that this impairment was greater in narcotic mothers, than in their husbands. This distress was an ostensible result of having to cope with the burden of a narcotic dependent offspring. In view of these findings, considering the poor prognosis associated with this, we suggest that management programmes for narcotic dependence include psychotherapeutic intervention directed towards reducing distress experienced by the parents. Possible lines for such intervention are suggested.

Anil, K.N., Srivastava, R.P., Chavan, B.S., Saxena, S.: Abuse of a boot polish by inhalation and ingestion: A case report. Indian Journal of Psychiatry, 1993, 35(1), 63-64.

This case report describes the abuse of boot polish by inhalation and ingestion in a 32 year old patient who also had alcohol dependence. Pleasurable psychological effects, carving, active search for the substance and tolerance were presented but withdrawal symptoms could not be demonstrated because of simultaneous alcohol dependence.

Badrinath, B., Sampath, G., Channabasanna, S.M.: Drug abuse as a symptom of psychoses. Indian Journal of Psychological Medicine Jan 1979 Vol 2(1) 7-10.

Of 134 patients admitted to NIMHANS in 1976 for drug abuse defined for the purpose of study as "The repetitive, continuous use of a drug or drugs in large quantities where not medically indicated, for a period of at least 6 months, prior to reporting at this hospital - 14 were given primary psychiatric diagnosis of other than primary drug addiction. 4 were schizophrenic, 7 manics, and 3 depressives. They were compared with the population of drug abusers in an attempt to find out if they differed from primary drug abusers in clinical features. The 14 psychotic drug abusers were found to differ from the non-psychotic abusers with respect to literacy, complications due to drug use, smoking and suicide attempts. The most commonly abused drug was alcohol in either group. No muslim was admitted for drug abuse.

Bagadia, V.N., Copalani Jethi, Pradhan, P.V., Shah, L.P.: Habitual use of cannabis in India in psychiatry patients. Indian Journal of Psychiatry (1976) 18, 141-146.

2000 new consecutive psychiatric out patients with their relatives and friends attending the outpatient department were initially interviewed by a psychiatric social worker regarding the use of cannabis. Only those taking cannabis regularly and daily were taken up for the present study. The study explored complete data on demography, clinical history, psychosocial and family history and other relevant fields. It was found that 28 patients were taking cannabis regularly. Of these, the last 20 patients were studied deeply. The findings were analyzed and evaluated.

Broota, K.D., and Singh, S.: Adjustment problems and socio-personal variables in drug abuse. *Indian Journal of Clinical Psychology* (1986 Mar) 13(1) 59-63

The adjustment problems and other socio-personal variables have been studied among a group of 120 Delhi university students, consisting of habitual users, occasional users, non-users and principled non-users. Sacks SCT, was used to assess subject's adjustment problems. A structured interview schedule was also administered to obtain information about socio-personal variables. Habitual-users had significantly higher scores on SCT, showing maladjustment in the areas of family, sex, interpersonal relationships, and self-concept in comparison to the other 3 groups. Further, the drug-users have family histories that could be a contributive factor.

Broota, K.D., Singh Sewa and Mathews, J.: A comparative study of drug users and non-users on self anchoring striving scale.

Indian Journal of Psychiatry, 1982, Vol 9(2), 223-227; (PA) 1290, Jan 84', 71.

30 drugs users and 30 non-users (postgraduate students) were administered a structured interview schedule and the self-anchoring striving scale. Results show that drug users had a lower level of aspiration than non-users. The personal hopes, aspirations, and fears of drug users were primarily centered around their own health, personal values, and economics with little concern for family, where as non-users were equally concerned about their own and family welfare.

Chakraborty, A.K., Ray, M. and Ganguly, S.S.: Drug abuse in medical students in Calcutta a preliminary study. *Indian Journal Medical Research* 71, March 1990, pp 465-461.

A study on 492 male and 73 female medical students residing in hostels in Calcutta city revealed that 44.9% of the males and none of the females used dependence producing drugs. Drugs thus abused were alcohol, cannabis barbiturates, amphetamines and opiates. Alcohol was the commonest drug used by 39% and drugs other than alcohol were used by 18.9%. Only 3.2% of the students were regular users of the drugs. Drugs other than alcohol were regularly used by 1.4%. Curiosity was the usual reason for taking drugs. Drug abuse was more common among senior students.

Chandrashekar, C.R., Channabasavanna, S.M., Ramakrishna, J., Isaac, M.K., Sekhar, K., Chatterji, S., Murthy, S.R., Sri Ram, T.G.: Use and abuse of alcohol and drugs in different cultures- a nine-country study. National Institute of Mental Health and Neuro Sciences. (Unpublished).

As part of C.A.R. study 40 key informants (professionals, users and their family members) were interviewed. Focus group interviews were conducted with 14 professionals, 6 heavy alcohol users, 10 family members of alcohol users and 6 cannabis users. The concepts of intoxication, tolerance, hangover, withdrawal, craving existed but without equivalent words in Kannada language. The concepts of loss of control, passing of time were not clear to the respondents. All of them were very clear about harmful effects of drinking/ drug use. However they expressed different views regarding normal use, abuse and heavy use. People differed in their views regarding positive/ negative effects of cannabis use. Thus the results show that certain diagnostic criteria like loss of control, persisting use despite evidence of harmful consequences, time spent on drug use, recurrent use under hazardous conditions require modifications to truly reflect the cultural aspects of alcohol / drug use.

Channabasavanna,S.M.: Epidemiology of drug abuse in India - An overview. In Proceedings of the Indo-US symposium of alcohol and drug abuse. (Ed) Ray R. and Pickens R.W. NIMHANS, India and Alcohol, Drug Abuse and Mental Health Administration, U.S.A.1986.

With a brief overview on the socio-reglious history of drug abuse, the epidemiological data on drug abuse was examined highlighting studies on epidemiological survey, general population, student population and psychiatric patient population. Results indicate a trend that overcome the problem of drug abuse is assuming enormous magnitude.

Channabasavanna,S.M.: The narcotic drugs act and the psychiatrist - an editorial. Indian Journal of Psychiatry April(1986), 28 (2) 101-102.

The narcotic drugs and psychotropic substances Act-1985 - The important features are - purpose in combating and preventing abuse of narcotic drugs and psychotropic substances and the illicit traffic there in.

The measures Central Government may take:

(a) co-ordination of action by various officers, state governments and other authorities. (b) obligation under international convention (c) assistance to the concerned authorities in foreign countries and international organizations. (d) identification treatment education, aftercare, rehabilitation and social integration of addicts. The narcotic commissioner will exercise all powers relating to cultivation and production of opium. The penalties include rigorous imprisonment of 10 to 20 years and a fine of more than 1 lakh rupees for illegal production / purchase / selling / use / import / export etc.

Chowdhary,A., Boral,G.C.,Ghosh,A.,Dalta.P.,Shibani Bera,Nandi,D.N.,Benerjee,G. Certain aspects of drug abuse - An epidemiological study. Indian Journal of Psychiatry(1982),24(3),227-229.

Certain aspects of drug abuse have been presented from the pooled data of psychiatric epidemiological surveys conducted by the authors in the rural areas of West Bengal. From the epidemiological studies conducted in different societies in rural West Bengal, we found a definite correlation between the existence of social disapproval and prevalence of drug abuse in that particular society. The rate is low where the disapproval or restriction was strong.

Chowdhary,S., Augustine,M.,Chandra,S. Two cases of cannabis psychosis. Indian Journal of Psychological Review Vol. 34 No:5,6,7. 1989,19-22.

Two patients who developed psychosis following a prolonged and excessive consumption of cannabis are reported. The patients responded quickly to withdrawal of cannabis, and low dose of anti-psychotic drug in one case. The cases support the existence of cannabis psychosis as a distinct clinical entity.

Chowdhary,R.K.,Singh Rajpal, Avasthi,A.,Gupta,R.: Non-Medical Drug Use Among Interns and House Officers. Indian Journal Psychiatry Vol.22(1) July 1980,P No 301-303.

A self administered Questionnaire was given to a sample of 105 interns and house officers working in Government. Medical College, Jammu. Questionnaires were designed to obtain information about socio-demographic characteristics, the frequency of non--medical drug use during the last one year and to enquire about reasons for drug intake. It was found that drugs commonly used were alcohol, tobacco,tranquilizers, amphetamines and cannabis. Most of the subjects used the same for 'company', festivity or curiosity.

Dasgupta,S.M.,Dwivedi,K.N.,Shrivastava,C.P.,Saxena,H.C.and Reddy,M.S.: A study of extent of cannabis problem and cannabis users in Varanasi. Indian Journal of Preventive and Social Medicine(Dec1972),3,244-249.

In this study, 75 shops selling cannabis in the entire Varanasi district were studied to find out the extent of cannabis problem and characteristics of cannabis users. It was found that there are 4,00,000 cannabis users in the district and in the city there were 1,50,000 cannabis users and majority of the users were males (94.3%) and majority of the cases fall in the age range of 25-44, and also most of the users are married (67.0%) and most of the users belong to the service class (37.7%). Amongst the 3 products of cannabis, Bhang was the product which was most used (61.3%). Majority of the users were heavy and moderate users.

Dube,K.C.,Kumar,A.: Prevalence and pattern of drug use amongst college students. Acta Psychiatric Scand (1978) 57,336-356.

This is a report on the study of the prevalence and pattern of the use of dependence - producing drugs on 1,192 post graduate students from the faculties of arts, science, and commerce and final year undergraduate medical students. The overall prevalence rate of drug use was 50.08%. The highest drug use was among male medical students. Male students preferred to use alcohol and bhang while females had a preference for meprobamate followed by alcohol. In the majority of cases, the age of initiation was in the teens. "Friends" were most responsible for suggesting drug use, although "more than one" influencing agencies outnumbered all the single influencing agents. Parents were found to have a significantly tolerant attitude towards drug use by their offsprings. "Personal reasons" were not responsible for indulgence in or abstaining from drug use, L.S.D users had the maximum number of after effects. The effects experienced in respect of most drugs were generally unpleasant and sometimes contrary to the expectation of users. Most "non-users" and infrequent users did not favour self-decision for drug indulgence though some moderate and frequent users were in favour of giving this freedom for some substances. Stringent measures against drug use among students were advocated by all drug users. More males, particularly male medical students, than females reported drug experience. Among male users, religion, caste, earlier education, residence, employment status, occupation of the father, parental education and family income were the variables found to be significantly associated with drug use.

Dubey,S.N.: A study of life stress and social support of drug addicts. Indian Journal of Clinical Psychology (1993) March 20:21-24.

Life events stress, daily hassles, uplifts and social support of the 25 narcotic drug addicts and 25 non-addicts has been studied. Drug addicts have scored significantly high on life events, stress and daily hassles, and low on uplifts and social support. It is inferred that stressful life combined with inadequate social support may be the predisposing causes of drug addiction.

Gandevia Katy.Y.: Rehabilitation in the field of drug abuse. Indian Journal of Social Work (Jan 1989) L(1) 61-68.

This paper attempts to examine the definitions, goals and key issues involved in the rehabilitation of drug addicts. It outlines the various approaches and models used in the field. The experiences of Burma, Malaysia and Britain are enumerated, so that they may provide a background for some action strategies for planning the rehabilitation programmes for drug addicts in India.

Gandevia Katy.Y.: Assessment of drug abuse, drug users and drug prevention services in Bombay. Sponsored by: Ministry of welfare Government of India. Department of Medical and Psychiatric Social work Tata Institute of Social Sciences, Deonar, Bombay, Sep 1989.

The research study on 'An Assessment of Drug Abuse, Drug users and Drug Prevention Services in

all major cities and towns was sponsored by the Ministry of Welfare, Government of India in January 1989 in order to assess the extent of drug use in India, factors which contribute to it and the services available to the addicts and their families.

Golechha,G.R.,Pande,D.M.,Sethi,I.C.,and Singh,R.A.: Agnihotra- A useful adjunct in recovery of a resistant demotivated smack addict. Indian Journal of Psychiatry(July 1987)29(3),247-252.

Agnihotra is a simple vedic ritual of lighting a pyramid of fire in a small copper pot and giving offering of ghee and rice on this fire at the time of sunset and sunrise with chanting of two mantras. It is reported to enhance the state of tranquility of mind and is reported to be of benefit to those addicted to various types of intoxicants. We used Agnihotra in a young smack addict who was poorly motivated and resisted all efforts to help him even when he got over the physical withdrawal features. The results were encouraging, over a period of 4 weeks. We found him to be a totally changed man who could go back to his work without any drugs. Follow up for more than a year revealed no recurrence and positive achievements in his work performance. The paper presents practice of Agnihotra, also known as homeotherapy, and discusses its role in drug addiction.

Gupta.A.K.,Jha.B.K. and Devi.S.: Heroin addiction;experiences from a general Psychiatryoutpatient department. Indian Journal of Psychiatry(1987) 29(1) 81-83.

A rapid increase in the number of heroin addicts has been seen in de-addiction clinics of Delhi. This is because of availability of cheaper form of heroin known as "Smack " or Brown Sugar". This paper describes the drug related clinical profile of patients who wanted de-addictions from smack. The study was conducted at department of psychiatry, Dr. Ram Manohar Lohia Hospital, New Delhi. The results show that a total of 1756 new cases were registered during the study. There were 193 (10.99%) cases presenting with smack addiction. Out of 193 cases of smack addiction-12 were graduates, 2 post graduates and 2 professionally qualified. 82.2% of sample was represented by auto rickshaw drivers, technicians, lab assistants, sweepers, peons, clerks and hawkers. 9.8% were school drop outs and unemployed, and 2% were students. Addiction to 'smack' is most prevalent among young males in occupation such as auto rickshaw drivers, sweepers, peons, semi-skilled workers and other class III and IV Government employees.

Gupta,R., Narang,R.L.,Singh,S.,Gupta,K.R.: Drug abuse among rickshaw pullers in the industrial town of Ludhiana. Indian Journal of Psychiatry (April 1986) 28(2) 145-149.

250 rickshaw pullers have been studied on socio-demographic factors, the extent of life use, recent use, current use, and the frequency of use of various drugs and motivating factors for consuming these drugs. The analysis of the results show that tobacco(92%) and alcohol (76%) in that order followed by cannabis (16%) and opium (2.4%) were the substances most commonly used sometime or the other by the rickshaw pullers.

Gupta,S.: Drug Abuse - Genetic Factors. Guru Nanak Journal of Sociology, Vol,8, No.1, April 1987. Drug abuse is very complex phenomenon, and is influenced by genetic, psychological, social and environmental factors. In this paper, the information regarding genetic factors has been reviewed. Human as well as animal pharmacogenetic studies have clearly demonstrated that the responses to alcohol are influenced by hereditary factors. Experiments with very valuable animal models have also demonstrated the role of hereditary factors in the abuse of opiates and barbiturates. Regarding abuse of opiates and barbiturates, only animal literature is available because animal models are more tractable than human studies and trait relevant features can be explored to a desired level. Individual differences, therefore, in the susceptibility to abuse drugs have a genetic component.

Gupta,S.: Drug Abuse: II Environmental Factors Guru Nanak Journal of Sociology, Vol,8.No:2,

October 1987.

In this paper, information regarding environmental factors has been reviewed. Two types of environmental factors namely microsetting and macrosetting have been found to influence drug abuse. Extensive human data is available. Most systematic studies have been done on alcohol. The analysis of the microsetting has been found to be helpful in the identification of similarities and differences in the use and abuse of different drugs. Although macroenvironmental factors have been found to have a clear influence on drug use, it is not clear how these factors interact with the individual. In other words, individual variation within a given population has not been assessed systematically.

Helode,R.D.: Prevention of drug abuse. Research Project conducted in School Of Studies In Psychology Pandit Ravishanker Shukla University Raipur.M.P. Oct 1989- Feb 1990.

Out 80 affiliated colleges, 18 colleges from urban area and 15 colleges from rural area were selected. The 5- point Likert Type attitude scale consisting of items was administered to 962 students (529 males and 433 females) selected from the 18 urban colleges and the same attitude scale was also administered to 750 students (428 males and 322 females) selected from 15 rural colleges on the basis of incidental - cum - random sampling. In addition, 13- item open ended questionnaire was also administered to the subjects of the present study.

Jindal,S.K.: Drug abuse among university students. A social background analysis. Indian Psychological Review 36 (1-2), 1991 ,33-37. The study was carried out to find the drugs taken by the university students, the frequency with which the drugs were taken and the factors which motivated them to take drugs. A sample of 50 students of Kurukshetra University was taken for the study. It was found that family background to a large extent was responsible for students indulging in the drug taking habit. The drugs taken were wine, opium, heroin, smack, charas, bhang, tobacco, hard liquor etc. The frequency ranged from daily to once a day.

Jindal,S.K.: Personality traits of drug addicts Indian Psychological Review 1988, Vol,33, NO:10,11,12,15-18.

The personality traits of drug addicts of Kurukshetra university were studied by Cattles 16.P.F. They were found to be reserved, detached, less intelligent, affected by feelings, emotionally unstable, humble mild and conforming, shy, restrained, timid, group dependent and sound follower, undisciplined, self-conflicts, careless, of protocol, tense frustrated, driven, over wrought.

Khanna Sumant, Desai,N., Channabasavanna,S.M.: Lorazepam dependence: A case report. Indian Journal of Psychiatry (1984),26(1),93-94.

Benzodiazepine dependence has become an established phenomenon which needs careful study (Lader,1983) with a large numbers of drugs as well as patients. Lorazepam is a newer benzodiazapine (Verma,1973) which has been growing in popularity. Due to the short lasting effect it was thought to have a low addiction potential. The presence of tolerance and the development of withdrawal symptoms supports the diagnosis of Lorazepam dependence. In the case presented withdrawal symptoms on therapeutic doses have also been reported and the high addiction potential of Lorazepam stressed.

Kumar,B.V.: Drug trafficking - A historical perspective. Indian Journal of Social Work(Jan 1989) L(1) 1-7.

The paper begins with a historical survey of the smuggling of heroin and other drugs in and out of India, and the gradual change, from India being merely a "transit" country in the drug route, to becoming an indigenous producer of the drug with its own underground distribution network. The paper proceeds to study the measures taken by the Narcotics Control Bureau to counter the organized crime in the area of drug manufacture and trafficking. Finally, a scrutiny is made of the legislation enacted, and of the line of action recommended in the comprehensive multidisciplinary outline of future activities in drug abuse control, adopted in Vienna in 1987.

Lal Narotam, Verma, S.M., Trivedi, J.K., and Gupta, S.C.: Measurement of adjustment of drug abuser on BAI

Indian Journal of Clinical Psychology (Sept, 1991) 18(2) 37-39.

Adjustment in different areas of day to-day functioning as measured by BAI, for two groups, ie, "users" (who relapsed after treatment) and "non-users" (who remained drug free after treatment) has been studied. Significantly more cases of "non-users" had adjustment of average level and above in areas of "home-adjustment", 'emotional adjustment' and in 'general adjustment'.

Lal, R.: Buprenorphine dependence - analysis of seven cases. Indian Journal of Psychiatry (1991), 33(1), 62-65.

Buprenorphine is a compound belonging to the mixed narcotic agonist-antagonist group. Though claimed to be a drug with low abuse potential initially, numerous reports of abuse and dependence have appeared in world literature. This communication reports the characteristics of 7 patients of buprenorphine dependence from a de-addiction centre in India.

Lodhi, P.H., Thakur, S.H.: Personality of drug addicts: Eysenckian Analysis.

Project Research carried out in Department of Psychology, University of Poona, Unpublished

The study shows that the drug addicts (brown-sugar) score higher on the Psychoticism and Neuroticism scales and lower on the Extraversion and Lie scales of the Revised Eysenck Personality Questionnaire, (Eysenck, Eysenck and Barrett, 1985). The findings have important implications in therapeutics, diagnosis and especially for planning the screening and prevention strategy.

Mahal, A.S., and Nair, M.C.: Dependence on petrol- A clinical study.

Indian Journal of Psychiatry, (1978), 20, 15-19.

The aim of this work was to study the clinical effects of petrol as well as to observe whether petrol produces dependence. Petrol inhalation is reported to produce perceptual changes, euphoria, fear, delusions, disturbance of consciousness, dream like state and multiple somatic manifestations. It was observed in the present study that the subjective feelings differed from time to time from euphoria to dullness, irritability and fear.

Malhotra, A., Balaji, M., Basu, D., Matloo, S.K., Varma, V.K., and Sehgal, S.: HIV screening and risk behaviour in psychoactive substance users. Indian Journal of Medical Research (A) 97, Nov. 1993, 231-233.

Patients admitted to the Drug De-addiction and Treatment Centre, Postgraduate Institute of Medical Education and Research, Chandigarh, were screened for HIV antibodies. Out of 116 patients, 45 (39%) were injecting drug users (IDUs), 29 (25%) were other drug users and 42 (36%) were primary users of alcohol. One IDU was HIV Seropositive (2.2% of the IDUs). Analysis of HIV related risk behavior showed that the IDUs were at high risk, because of needle sharing as also because of having multiple sex partners. The potential of HIV infection in these persons practicing high-risk behavior calls for

timely preventive measures.

Malhotra,A.K.,Kapur,R.L.,Murthy,V.N.: Drug dependence - A preliminary survey of hospital .
Indian Journal of Clinical Psychology (1978) 5: 131-137.

A preliminary survey was made of the cases registered at the National Institute of Mental health and Neurosciences, Bangalore, during the year 1975, with a view to study the characteristics of drug addicts and alcoholics . There were 55 drug addicts and 202 alcoholics getting in-patient and out patient treatment. Alcoholics and psychiatric patients showed higher relapse rate than drug addicts. Drug addict's belonged to a younger age group, and were unmarried. Majority of psychiatric patients, alcoholics and drug addicts were males but in the drug addicts group female representation was higher than in the alcoholic group. Drug addiction, alcoholism and psychiatric illness were found to be more common, in the low income group and amongst literates. It is presumed that drug addiction and alcoholism also occur in the high income group but the number is small in the study because of the reluctance of this class.

Malhotra,A.K.,and Varma,V.K.: Extent of alcohol and drug use in India.
Indian Journal of Clinical Psychology, (1983)10;183-194.

A continuing governmental and public concern with non-medical drug use, in India has been reflected in the immense and accelerating accumulation of survey literature in a number of ways. The studies reviewed in the present paper vividly demonstrate the state of affairs in area of drug abuse in India. Wishful thinking of many concerned that a national picture may emerge has not been realized inspite of the two decades of research. However the time has come where scientists must move beyond the pilot and preliminary fact finding investigations to in depth studies of the phenomenon.

Malhotra, A., and Murthy,V.: Personality correlates in drug addiction.
Indian Journal of Clinical Psychology (1977)4:123-128.

10 psychiatric patients and 10 normals were evaluated on 16P.F.,MPQ TAT and detailed case history for each case. Results show that the addiction group has a significantly higher psychopathic and hostility score, high ergic tension and also scores high on the simple, ampuered factor compared to normal controls. This group also showed more neurotic traits and antisoical behaviour patterns during childhood, as compared to other control groups. Data obtained indicates that the addiction group is more similar to the psychiatric control group.

Malhotra,S.,Kumar,H.,Aneja,S.,Arora,S.K., and Malhotra,J.: Substance abuse: Knowledge and perception in adolescents. Indian Pediatrics (1990 May) 27(5); 488-491.

This study was under taken in high school students to find out their source of knowledge, perception about drugs and the reasons for starting drugs. The present study was undertaken in 500 school children of both sexes, studying in class XII of four public schools. The role of peer group in persuading each other for trying drugs was perceived to be insignificant in both sexes except for alcohol and tobacco. Males perceived higher risk of liquor and tobacco intake due to peer influence as compared to females. Curiosity was the single most important factor perceived by the young students. Findings have been discussed.

Mirchandani,D.: Out-patient detoxification of substance abusers.
Indian Journal of Social Work (Jan 1989)L(1) 91-101.

Starting with a brief introduction to and explanations of the terms used in the field of drug abuse management, the paper proceeds to outline techniques of in-patient and out-patient detoxification, based on the writer's own experience in the area of treatment of addicts.

Mohan.D.,Thomas.M.G. and Prabhu.G.G.: Prevalence of Drug Abuse in High School Population. Indian Journal of Psychiatry(1978),20,20-24.

The present survey highlights the abuse of alcohol and tobacco, as the most popular drugs of dependence in a school sampled population. It also highlights the absence of opiate abuse.

Mohan.D.,Prabhakar.A.K., Mohan.M.: Factors Associated with the Prevalence of Drug Abuse Among Delhi University Students. Indian Journal of Psychiatry(1978),20.332-338.

The present study estimates the prevalence and explores the significance of variables associated with drug abuse. It reveals that the overall prevalence rate of drug abuse was 32.2%. The most frequently abused drugs were found to be alcohol and tobacco followed by cannabis in males and pain killers in females. Father's income, education, place of residence and respondent's course of study were highly significant factors related to drug abuse in both male and female students. Age of the respondent, type of college, father's occupation, type of family and dating practices were significantly associated with drug abuse only among the male students. The initiation to drug abuse was found to be most common after leaving high school. Majority of the students were experimental abusers.

Mohan,D.,Adityanjee,Saxena,S.,Sethi,H.S.: Drug and Alcohol dependence: The past decade and future view from a developing country. Indian Journal of Psychiatry (1983), 25(4).269-274.

The problem of "Drug abuse" remains an ongoing controversy because many issues have been unresolved. The use of drugs had become an integral part of the daily life of certain communities. Questions have been raised in the west referring to individual rights concerning the use of drugs. Where as it is culture bound in east, Western and North American concern about drug use has started from anxiety about the fear of the lower classes, which were then transferred on to the drugs they used. The phenomenon of drug use has to be perceived differently in different societies. The terms "drug use" and "drug abuse" reflect a value judgement, in relation to opium and cannabis, they reflect the dichotomy between consuming and growing countries. Treatment issues in opiate are methadone and heroin maintenance programs, self-help groups etc. The major failure in the last decade was because of overzealous implementation of the simplistic model of the economics of "supply and demand". The major lesson learnt was that drug habits picked up in alien cultures under different circumstances do not become a part of individual life style.

The technical advances in future are likely to be in 2 areas

- (1) Discovery of pharmacological method of treatment
- (2) The change in attitudes towards alcohol and cannabis.

Mohan,D.,Sundaram,K.R.,Sharma,R.K.,Darshan,S.,Neki,J.S.: Prevalence of drug abuse in young rural males in Punjab. Indian Journal of Medical Research,68 (Oct 1978), 689-694.

A study was carried out on the prevalence and pattern of drug abuse in adolescents in rural areas of border districts of Punjab. The total sample consisted of 281 respondents. The data was collected with the help of semi-structured pre-tested interview schedules. The overall prevalence of drug abuse including alcohol and tobacco was 40.2%. The most common drugs of abuse were alcohol 32.9% and tobacco 14.4%, opium, cannabis and painkillers being abused by 0.8%. The pattern of abuse was mostly experimental and was found to be highest in illiterate youth.

Mohan,D.,Prabhakar,A.K.and Sharma,P.N.: Prevalence and pattern of drug abuse among Delhi university students. Indian Journal of Medical Research 66,4th Oct (1977) 627- 634.

A study conducted during 1975 among Delhi university students indicated the extent of drug abuse

in almost one third (32.2%) of the student population. After excluding the abusers of alcohol and tobacco, this figure worked out 18.7%. The prevalence of drug abuse among male students was almost two and a half times than in female students. The study indicated that the commonest drug abused excluding alcohol and tobacco was cannabis in boys and analgesics in girls. More than 80% of students abused drugs in an experimental manner while the true addicts accounted for hardly 2.2% (excluding alcohol and tobacco).

Mohan, Y., Sharma, R.C., Dhatwalia, R.S., Rajput, G.C.: Opium de-addiction camps in rural Himachal Pradesh.

Indian Journal of Community Medicine Vol, 26(2) 1991. 64-69.

Socio - demographic and drug related variables of 107 male tribal opium addicts of Himachal Pradesh, who volunteered for treatment in rural de-addiction camps have been presented. Results of the study and reasons for the success of de-addiction camps have been discussed.

Monterio, D.: A study of functional aspects of drug addicts families.

Dissertation submitted to the University of Bangalore, Dept. of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences. 1987.

The purpose of this investigation is to study the functional aspects of the drug addicts' families. In this context, functional aspects would pertain to the family interactional patterns and typologies to which the families belong. 30 drug addicts and 30 normals were studied, by administering the Family Interaction Patterns Scale, and Family Typology Scale. The results were tested for statistical significant difference using 't' test and correlation for the scores of the sub-scales of the scales used. Statistical analysis showed that the families of drug addicts were dysfunctional in the areas of reinforcement, social support system, role, communication and leadership as compared with the normal group. There was statistically significant difference between the two groups studied. Also, almost two third of the drug addicts' families belonged to either egotistic, altruistic and anomic types of families, indicating definite pathology, in comparison with the normal group, who all belonged to the normal cohesive type of family. There was also found to be statistical significant difference between the typologies of the two groups studied. Implications of the study are also discussed.

Moses, E.G.: Social character analysis of young male narcotic addicts in India.

Indian Journal of Clinical Psychology (1985 Mar) 12(1) 13-22.

The investigation was undertaken to identify and to understand the character traits of young male Indian addicts that facilitated narcotic addiction, and what factors in society developed these traits. 10 subjects constituted the sample. Modified Structured Interview Questionnaire (Fromm and Macoby) 1970 and Rorschach Ink Blot test were used. The results are interpreted in the light of present day theoretical background and research reports published.

Munjal, G.C., Jiloha, R.C.: Drug abuse in Delhi; Experience of a De-addiction unit in a General Hospital. Indian Journal of Psychiatry (Jan 1986) 28 (1).

The rapidly changing situation in the drug abuse scene is taking an alarming turn. The drug addiction committee report had warned that the situation in India will worsen if adequate measures were not adopted to curb the evil. All the out patient records of the De-addiction clinic of G.B. Pant Hospital New Delhi were reviewed, and the patients were classified according to International Classification of Diseases (ICD-9). The results indicated that the age group between 21-30 yrs is most vulnerable since there is increase in the clientele of this age group.

Nadkarni, V.V.: Repertoire of interventions in the field of drug abuse.

Indian Journal of Social work (Jan 1989) L (1) 9-16.

Social workers and de-addiction workers need to be aware of the wide repertoire of interventions required to deal with the problem of drug addiction. The article discusses various modalities of interventions at the macro and micro levels and some influencing parameters.

Nizamie, H.S., Ray, D.: Phensedyl - will the Iceberg melt?
Indian Journal of Psychiatry (1991), 33(3), 212-215.

Phensedyl abuse has rarely been reported though it is widely abused in certain parts of India. Three cases of dependence on phensedyl a widely used cough linctus, are described. All of them required hospitalization. This signals the dangerous abuse potential of an apparently innocuous medication.

Ponnudurai, R., Somasundaram, O., Indira, T.P., Gunasekar, P.: Alcohol and drug abuse among internees.
Indian Journal of Psychiatry (1984), 26, (2), 128-132.

The study was designed to assess the various factors pertaining to alcohol and drug abuse among interness with the help of the youth survey questionnaire developed by the WHO. 22.67% of the males indulged in alcohol abuse at least once a month. Correspondingly cannabis was abused by 9.33% which is the most commonly abused drug of addiction, followed by sedatives and tranquilizers. The commonest explanations offered for the non-medical drug abuse were, to be sociable, for enjoyment, curiosity and relief of psychological stress. Friends have been the main source of introduction. Most of them reported that it was easy to obtain the drugs like marijuana and amphetamines.

Puliyel, M.J., Agarwal, R.K., Chasoria, M.: The incidence and nature of drug abuse in adolescence. Personality correlates and predictive models. Indian Pediatrics (1981) July 18 443-448. 1411 adolescents aged between 14 and 19 comprised the material for this study. Questionnaire technique was employed in two parts; a disguised questionnaire to identify drug abusers and a second part the HSPQ of Cattell. The data obtained were analysed statistically using the SPSS. The overall incidence of drug abuse was about 30%, with highest incidence among college boys followed by school boys and college girls. Abuse of Bhang was most frequent followed by tobacco and alcohol. Age and parental income were insignificant. Based on statistical analysis of personality, predictive models have been developed enabling identification of actual and potential drug abusers and nature of drug abuse.

Purnima, M.: Working with the families of the addicts. Indian Journal of Social Work (Jan 1989) L(1) 45-56.

This paper examines work with the families of drug addicts in terms of (a) dealing with family pathology underlying addiction and the fostering of healthy family interaction to smoothen the path to recovery, (b) helping the family to cope with the impact of addiction on the family and (c) fostering family understanding of addiction and ensuring its contribution to the recovery of the addict. It focuses on the concept of 'family power' since the family is viewed as the major unit for the strength and support for the addict, through the process of treatment and rehabilitation and one that can provide relief and support to itself as well as to other families which are similarly placed.

Rao, S.B., Wautamulte, A.S., Mallapur, M.D.: Drug use and addiction among students of J.N. medical college, Belgaum. Indian Journal of Preventive Social Medicine, Vol, 12, No:3, Sept 1981 pp149.

A standard questionnaire was administered to total of 30 students of J.N. medical college, Belgaum. Out of these 30th respondents, 43.75% admitted having taken the drugs without medical prescription.

The users and non - users differed significantly in regard to age and sex, smoking habit, love life and rural - urban background. Out of 133 drug users 9 were addicts to alcohol, 2 to mandrax and one each to methedine and ganja. Majority of the students took the drug for first time in bars. Fun and company was usually given as the reason for having started the use of drugs.

Rao, V.A.: Drug Abuse in Madurai British Journal of Psychiatry (1979) 134, 221.
178 (175 males) addicts and alcoholics in our department, were studied in 5 years (1970-4). We included cannabis users smoking more than 0.5 grams daily for several years. Drugs involved were alcohol and or cannabis in 148 (80%), multiple drugs in 16 (9%) barbiturates, amphetamines and opiates in 16 (11%). The incidence of new cases appears to have doubled between 1970 and 1975. The study has indicated that addicts form a small percentage of those who seek psychiatric help (1.7%), though this proportion is rising. Illiterates in India are generally aware of drugs, which in their view harm the body. Currently there has been a total prohibition of liquor consumption in some parts of India. The cultivation of cannabis has been banned and within the next decade it will not be available from indigenous sources.

Rao Venkoba.A., Sukumar.A. and Neelambaradharan.C.: Drug Addiction - A report from Madurai, India.
Indian Journal of Psychiatry (1978) 20, 310-317.

178 patients addicted to various drugs and who attended the department of psychiatry, Erskine Hospital, Madurai between 1979 and 1974 formed the material. 80% of cases started addictive behavior of any type before they were 30. Cannabis and Alcohol either singly or together contributed to 80% of the addict population. The duration varied from 6 months to over 30 years. 11% of the patients had attempted suicide prior to 1st consultation. More than a 3rd in the series had a family history of psychiatric morbidity. 50 patients were followed up for a period varying from 4 to 8 years after consultation and 5 to 40 years from the time of the inception of addiction. The incidence of addiction in the department has risen from 1.1% to 2.4% during the period 1970-74. 23 had discontinued drugs. While 16 were continuing the drug regularly, 5 were continuing intermittently. There were 6 deaths, 5 from suicide and from heart failure. That drug abuse in India is not a major problem has been discussed.

Ravi, K., Agarwal, Vijay, K., Varma and Dang, R.: Inter-relationship between drug use, anomie, alienation and authoritarianism amongst university students.
Indian Journal of Psychiatry (1980) 22(1) 103-107.

The degree of addictive substance usage score and three personality variables, namely, authoritarianism, alienation and anomie were measured in 197 university students through a self-administered questionnaire. WHO'S Youth Survey Questionnaire for drug use, Verma et al's scale of authoritarianism, Score's scale of anomie, and Peralin's Scale of Alienation, were used. A study of the relationship between the co-variables was studied and is discussed.

Ray, Mira and Chakraborty, A.K.: Smoking and drug abuse among the newly admitted students of medical colleges.
Indian Journal of Public Health Vol, XXV, No: 1 Jan-March.

The study among 557 male and 148 female students who were admitted to medical colleges of West Bengal in 1979 revealed that .98 or 17.6% of the male and none of the female students had the experience of smoking. Only 3.2% were regular smokers. Drug abuse was found in 2.2% of the male students and 0.7% used dependence producing drugs regularly. Smoking and drug abuse were common among students from urban areas (23 %) than among those from rural areas (84%). A rising

trend of regular smoking and drug abuse was noted with increase in income of parents.

Ray,R..Prabhu,G.G.,Mohan.D.,Nath,L.M.,Neki,J.S.: Chronic cannabis use and cognitive functions. Indian Journal of Medical Research (June 1979);69;996-1000.

A study was undertaken to assess and compare the cognitive functions of chronic cannabis users with non-users. Non-users were selected from the general population of the village to which the users belonged. Subjects were assessed by means of objective tests for their memory ,attention, concentration and perceptomotor functions. The tests did not reveal any significant difference between the two groups.

Sahasi,G.,Chawla,H.M.,Bhushan,B., and Kacker,C.: Eysenck's personality questionnaire scores of heroin addicts in India. Indian Journal of Psychiatry 1990,32(1),25-29.

One hundred and ten male heroin addicts were administered EPQ -A self reporting measure. High scores on psychotism,neuroticism and lie scale, and low scores on extroversion in heroin addicts as compared to normal controls(n-50) were observed in this study which were comparable with those reported earlier. Further it appears that high neuroticism scores are more consistent feature of heroin addicts than deviation on extroversion. Also an attempt to uncover epidemiological factors underlying heroin addiction has been made.

Saramah,P.L.,Andrade,C.,Channabasavanna,S.M.: Personality characteristics of parents of male narcotic dependant patients: A preliminary investigation of narcotic family. Indian Journal of Psychological Medicine (Jan 1989) 12(1)17-20.

Addictogenic parental characteristics have been suggested to predispose to narcotic dependence in offspring, but little methodical evidence exists to support this claim. In a preliminary investigation we used the EPI to study the parents of 21 narcotic dependant (DSMIII) males and 21 matched controls. We found no differences between 'narcotic parents' and controls, nor between spouses in each group. We suggest that in Indian families parents may have no addictogenic personality characteristics. However, the field in certain regards remains open, and we indicate possible lines for future research.

Satinder,Paul,K. and Black,Alexander.: Cannabis use and sensation - seeking orientation. Indian Journal of Psychology,1984(Jan),Voi 116(1),,101-105;(PA) 28586 Nov 84,'71.

Investigated cannabis use and its relationship with sensation seeking orientation in 48 undergraduates. Users and non-users were matched for sex, age and education. Cannabis users scored higher on all the 4 subscales of sensation seeking scale(SSS). ANCOVA controlling for the use of alcohol, cigarettes and LSD decreased the level of significance between the user and non-users group on all the subscales and the total SSS scores; however, the differences between the user and non-users groups remained significant on disinhibition subscale and the total SSS scores. Findings support the link between drug use may serve mainly to disinhibit behavior in social settings.

Satija,D.C.,Sharma,D.K.,Arun,G.,Nathawat,S.S.: Prognostic significance of psychopathology in the abstinence from opiate addiction. Indian Journal of Psychiatry 31(2)1989(157-162).

The aim of the present study was to find out the influence of psychopathology on abstinence from opiate addiction. A group of 54 opiate addicts with psychopathology was compared with another group of 55 opiate addicts without psychopathology. Both the groups were detoxified and followed up for a period of 12 months. Common psychopathology in opiate addicts consisted of psychopathic

personality disorder, manic depressive psychosis, schizophrenic, psychosomatic and neurotic disorders. Abstinence rate was 18.8% in opiate addicts with psychopathology in contrast to 60.8% in addicts without psychopathology. The implications of the findings have been discussed.

Satiga,G.,Bhukal Goru Ram, Nathawat,S.S., Gupta,V.C., Sharma,D.K.: Antecedents of opiate addiction; A study conducted in Western Rajasthan. *Indian Journal of Psychiatry* (1991)33(3), 187-192.

The present study was conducted from September 88'to 89' at de-toxification centre attached to psychiatric centre Jodhpur, for evaluation of time line of events and antecedents in 50 opiate addicts. All the patients were evaluated on specially designed proforma, sequence of events in the course of addiction, childhood traumatic events, social factors and addiction severity index scale. As regards the time line of events, cigarette smoking and alcohol intake preceded hard addiction like opiate. On the basis of preceding events, two groups can be differentiated in opiate addicts - initial childhood trauma group (30%) and non initial childhood trauma group(initial drugs use group) (70%). The former group entertained one or more traumatic childhood events before the age of 15 years, while the social factors were pronounced as determinant of opiate addiction in later group. Implications of these findings have been discussed.

Saxena Shekar, Mohan,D.,Adityanji.: Pentazocine Abuse: Review and a report on eighteen cases. *Indian Journal of Psychiatry*, April,1985,27(2) 149-152.

Pentazocine is usually not recognized as a dependence producing drug, inspite of accumulation of a number of case reports on pentazocine abuse and dependence in the world literature. These cases form a spectrum from isolated abuse in patients with chronic pain to pentazocine being just another drug in the setting of multiple addictions. Recommendation is made for more judicious use of pentazocine in view of its high dependence potential.

Saxena Shekhar, Mohan.D.: Rapid increase of heroin dependence in Delhi;some initial observations. *Indian Journal of Psychiatry* (1984) 26(1) 41-45.

The present paper documents and discusses the rapid increase in the problem of heroin dependence in the city of Delhi in recent years. Initial observations on patients with heroin dependence attending the De-addiction clinic of large general hospital are described with difficulties encountered in the clinical management of these patients. It is suggested that sustained efforts be made to control this problem because heroin is likely to give rise to medical and social consequences of serious nature in the near future.

Sethi,B.B.,Manchanda Rahul.: Drug abuse among medical students
Indian Journal of Psychiatry 1977,19(4),31-35.

748 (553 male, 195 female) undergraduate students of K.G.'S medical college, Lucknow were surveyed using a structured proforma for the prevalence and pattern of drug abuse and their socio-demographic variables. Drug abuse was operationally defined as "indulgence in a drug with frequency of at least once a month with out medical prescription". The inquiry consisted of information in regard to the abuse of amphetamines, barbiturates, non-barbiturates sedatives, minor and major tranquilizers. alcohol, cannabis and related compounds and opiates. 25% of our students were found to abuse a drug at least once in a month. Male sex (93.6%), residence in the hostel (86.2%) and family income over Rs.1,001 p.m.(56.4%) among those who abused a drug were significant findings. In the abuses group the commonly abused drugs were minor tranquilizers(53.4%),alcohol (43.6%),amphetamines(23.4%),bhang (14.9%) and non-barbiturate sedatives(8.5%). Amphetamine abuse was during examinations only when 8.5% of abusers took it almost daily. Four students took minor tranquilizers almost daily. Majority (64.9%) abused one drug only. The most of the students surveyed were occasional abusers and were not showing any physical dependence

Sethi B.B., and Gupta S.C.: Motivational factors in Bhang use.
Indian Journal of Psychiatry (1975),17,18-15.

50 subjects who were regularly taking Bhang were studied to evaluate the motivational aspects of

Bhang use. The sample was divided into traditional (22) and non-traditional (28), bhang users on the basis of its use in their families. Demographic and social variables revealed that traditional users came from higher Socio-Economic strata. Brahmins were over represented in the traditional group. The traditional users start taking at an earlier age than the non-traditional. There appears to be a higher frequency of deviant personalities in the non-traditional group. Regarding initiation of Bhang usage, 44% started as it was traditional in their families. 18% were initiated by friends and a similar number took it for its euphoric effect. Others took it for medicinal purposes. Common factors enumerated for continuation of this habit were to obtain a state of euphoria (66%) to avoid boredom and fatigue (66%) and to enhance working capacity (38%).

Sethi.B.B.,and Trivedi.J.K.: Drug Abuse in Rural Population.Indian Journal of psychiatry (1979) 22 (1-4) 211-216.

A field survey of rural population was conducted to estimate the prevalence of drug abuse, associated socio-demographic factors and motivating phenomena. In the population of 2415 individuals 40% were up to the age of 10 years and were excluded from the study. Out of a total of 2010 individuals we found that there were 21.4% drug abusers. Alcohol was found to be the commonest drug abuse followed by cannabis. Findings are discussed.

Sethi B.B. and Manchanda.R.: Pattern of Drug Abuse Among Male Students.
Indian Journal of Psychiatry(1978) 20,166-173.

We have in the present study observed the extent and pattern of drug abuse among 1513 students drawn from degree colleges in Lucknow city. Further, various socio-demographic variables in relation to drug abuse were also investigated. As per the criterion adopted, 11.5% students were categorized as 'drug abusers' Alcohol (51.1%) and Bhang (40.8%) were the commonest drugs of abuse. Almost daily intake was as follows :-Bhang (8), minor tranquilizers and non-barbiturate sedatives(3 each) and amphetamines(2). In the consideration of socio-demographic variables it was observed that significantly more abusers were Hindus (81.6%),resided in off campus apartment (37.9%) and belonged to families with an income group of Rs. 501- 1000 per month (25.5%).

Sethi,B.B.,Tiwari,S.C.,Kumar,P.,Trivedi,J.K.: Drug abuse in India: An overview with special reference to cannabis.

Indian Journal of Psychiatry (1984).26(1),55-66.

The Indian literature related to drug abuse in general and cannabis in particular has been reviewed and possible implications discussed. On this regard to solve the existing controversy, for the physical, mental, cognitive and socio economic functions the results were compared with a matched control group. Results of this study did not reveal any impairment in these areas. It is concluded that cannabis, in India, may not be as much injurious to health as has often been mentioned in western countries. Future areas of research have been suggested.

Sharma,A.K.: Pattern of drug use in Indian Heroin Addicts. Indian Journal of Psychiatry 1990 32(4) 341-344. The pattern of drug use was studied in 213 heroin addicts constituting 80.7% of the patient population attending ABHAY-11 De-addiction cum rehabilitation centre. All heroin addicts were male and 98.6% of all had consumed or have been consuming other drugs concurrently. Tobacco, cannabis and alcohol were the drugs commonly used by the addicts. The mean age for beginning

tobacco consumption was lower and highest was for medicinal drugs like sedatives, hypnotics and tranquillizers. The sequential pattern of drug was tobacco, cannabis, alcohol, heroin, opium natural and medicines like sedatives, analgesics, hypnotics and tranquillizers. Most of the patients had been regular cannabis and alcohol users. Occasional use of opium or medicines was a result of substitution for heroin in the attempt to control the withdrawal symptoms.

Singh, G.: Drug Use Among Medical Students - Socio-demographic and Personality factors. *Indian Journal of Psychiatry*(1979)21(1-4)339-344.

All 750 students enrolled in the medical college, Patiala during the academic year 1976-77 were given a self-administered questionnaire to elicit the extent and pattern of drug use. On the basis of their responses they were classified as (a) frequent or heavy users, (b) casual or experimental users and (c) non-economic, demographic, family and personality variables. It was found that drug users were more likely to (i) to be males than females, especially among the frequent users, (ii) to come from a rural background, (iii) to have scored lower at the high school examination than the non-users, (iv) to have a higher proportion of friends who are also drug users. Most of the other socio-demographic variables studied including family structures, place of residence, level of education, occupation and income of parents, nature of family relations and perceived intactness of the family, plus the E.P.I test scores failed to clearly distinguish the drug users from non-users.

Singh, G.: Epidemiology of alcohol abuse in India. In *Proceedings of the Indo-US symposium on alcohol and drug abuse*. Sponsored by NIMHANS, India and Alcohol, Drug, Abuse and Mental Health Administration, U.S.A. 1986. Ed. Ray, R & Pickens, R.W.

A review of the epidemiological studies in India shows that alcohol use is limited to a minority population (20% - 35%) and the rates are higher among medical students (40% - 50%). However in spite of large number of surveys it is difficult to generalise at a national level. This is partly because of methodological problems and also due to reliability in consumption over time. It appears that calculations based on log normal distribution underestimates the number of heavy and very heavy users in the community.

Singh, Gulab, Singh, N.P.: Drug abuse in medical students - A randomized response technique approach. *Indian Journal of Preventive Social Medicine*, Vol 12, No:4, Dec 1981, 170-172.

Drug addictivity being such a sensitive attribute, the study is carried out with a view to study the incidence of drug in take among the medical students in Calcutta using the Warner's randomized response technique. Total sample size was 412 consisting of both boarder (br) day scholars (ds) boys and girls. .072 proportion of boys (ds) used sleeping pills. .125 proportion of boarders used the same. .225 proportion of boys (br) and .300 proportion of boys (ds) took drugs girls (br) - .2 proportion took sleeping pills. - .139 proportion took drugs others than alcohol.

Singh, Gurmeet.: Drug Use Among Medical Students - Prevalence of pattern of use. *Indian Journal of Psychiatry*(1979)21(1-4) 332-338.

All 750 undergraduate students of medical college, Patiala during the academic year 1976-1977 were covered in this survey. Seven out of 10 students were found to have used some drug in the past. The life time prevalence being 82.4% among boys and 29.6% among girls. A majority of students were poly drug users and the commonest drugs used were alcohol (58%), tranquilizers (47%) and tobacco (36%), However, the prevalence of daily use is low, it being highest for cigarette smoking by 9.4% of students, while less than 2% report daily use of alcohol. The only drugs used on daily basis were stimulants (0.9%), tranquilizers (0.6%) and sedatives (0.3%). The number of drug users is seen to increase by approximately. 100% in each year of study in the medical college. The need to relax and

relieve tensions or to enjoy starting drug use in a majority of students. With the exception of alcohol, tobacco and tranquilizers, most of the students stated that they would probably not use any of the other drugs in the future.

Singh, Gurmeet., Singh Rajpal, Jindal, K.C.: Drug use among physicians and medical students. *Indian Journal of Medical Research* 73, April 1981, 594-602.

100 subjects each from faculty members and residents, and undergraduates students from a medical college were selected randomly. The life time prevalence of drug use was 73.3% for consultants, 79.2% for residents and 71.1% for undergraduates. The commonest drug used was alcohol followed by tranquilizers, sedatives, stimulants, tobacco and cannabis. Current use as shown by the 30 day prevalence rate showed a considerable fall in the use of most drugs, while only between 10-20% were admitted to daily use of drugs. This was confined to alcohol and tobacco among the consultants, while a small percentage of students are also taking tranquilizers, stimulants and sedatives, the number of drug users increased by approximately 10% in each year study. A majority had used alcohol, opium and tobacco during their high school years, whereas with regard to tranquilizers most had started their use in the medical college. Another significant finding was high rate of multiple drug use among the undergraduates and residents in contrast to the consultant staff. The commonest reason given by all categories for drug taking was to obtain relief from anxiety and tension.

Singh, K.: Attitude of students towards drug addiction. *Indian Journal of Psychological Review* (1982) 22;2;30-35.

250 students studying in 4 degree colleges and university campus in Chandigarh and degree colleges and university campus in Kurukshetra were selected to study the attitude towards drug addiction. It was found that students with low level of education have significantly more favorable attitudes towards drug addicts as compared to the students of higher level of education and modernity is a significant factor in making the favorable attitudes towards drug addicts.

Singh, S.: Adolescents drug abuse and family environment. *Indian Journal of Clinical Psychology* (1981 Sept) 8(2) 151-155.

The purpose of present article was to attempt an understanding of the relative roles of both personal as well as environmental factors in adolescents drug abuse behavior. Adolescents drug abuse behavior like other forms of human behaviour is a complex phenomenon attributable to various biological, physiological, psychological and socio-cultural factors. These research findings can certainly be helpful, in not only the early identification of drug prone cases but also be useful for carrying out therapeutic, preventive and rehabilitation programmes in the field.

Singh, S., Chopra, N.: Subject variables in drug use. *Indian Journal of Clinical Psychology* 1979, 6:149-152.

A sample of 60 students comprising of two groups of drug users and nonusers, was selected from the faculty of law, University of Delhi. The two groups were comparable in size, sex, average age, educational standards and family income. A battery of psychological tests was administered to each of the subjects. The results showed that the drug taking subjects, in general possessed a low degree of ego strength, a higher level of anxiety and scored high on neuroticism and extra version dimension of personality, in comparison to the subjects who did not indulge in drug use.

Singh, S., Brooker, K.D., and Singh, J.G.: Psychological adjustment and use behavior. *Indian Journal of Clinical Psychology* 1983, 10; 145-149.

A sample of 120 male students of Delhi university campus comprising of 4 groups :- habitual users (HU), occasional users (OU), non-users (NU) and principled non-users (PNU) was selected and

groups were matched with regard to size, age and education. A structured interview schedule was used to collect subjects biodata and information relating to their drug use behavior. Sacks Sentence Completion Test was administered for assessing subjects adjustment relating to family, sex, interpersonal relations and self-concept. The results showed the habitual users as having the highest scores in all those areas among the four groups. Habitual users in general, showed maximum maladjustment relating to family,sex,interpersonal relations and self-concept, whereas rest of the three groups of subjects did not reveal any significant difference in their adjustment relating to these areas.

Sharma,H.K.,and Mohan,D.: Systematic Evaluation of Intervention strategy in Drug Abuse- An experience of developing country.

Proceedings of the Indo-US symposium on alcohol and drug abuse. NIMHANS,India and Alcohol,Drug Abuse and Mental Health Administration, U.S.A.1986.Ed. Ray,R. & Pickens, R.W.

A number of preventive approaches have been developed in recent times to reduce drug related problems. These include legal measures, social action, medical intervention and health education. The last two are the most frequently used models. However, in India there is a dearth of culturally relevant package for local application. The present communication highlights the findings of one such recently concluded study on the effects of educative intervention programme on alcohol and tobacco use. Preliminary observations show that the impact of this programme was maximum on casual users and not on regular users. The programme needs further refinement.

Srivastava,R., Srivastava,B.: Punctuality and life satisfaction among Tranquilizer users. Indian Psychological Review 30 (3) 36-38, 1986.

The present study was designed to study punctuality and life satisfaction among tranquilizer users and nonusers. The study was made on a sample of 100 older addicts, 50 traquilizer users and 50 nonusers from Azamgarh district whose age ranged from 20-35 years with mean age of 28 years. An individual addicted to drug or any other tranquilizers for a period of 2 years or more without any medical advice is regarded as tranquilizer user. The results showed drug users differ significantly than non drug users on punctuality and life satisfaction scale.Non drug users are more punctual than drug users. Nondrug users reported greater life satisfaction than drug users.

Srider,K.P.,Jaswal.: Preventive education in drug abuse.
Indian Journal of Social Work (Jan 1989) 50 (1),17-29.

Today the misuse and abuse of drugs is one of the world's most widespread and critical problems. Medical treatment has been our main answer to date. But, considering the high rate of relapse, the expense and the lack of adequate number of professionals, compounded by the easy availability of drugs, treatment has not been an effective answer to the problems. This paper explores the various prevention strategies on drug abuse education which could be adopted in our fight for a drug-free society.

Thacore.V.R.: Drug Abuse in India with special reference to Lucknow.
Indian Journal of Psychiatry (1972) July,14,257-261.

This paper has attempted to portray the problem and extent of drug abuse in the city of Lucknow against a background of its prevalence in India as a whole. Data collected from the community survey, study of student population and from clinical practice are presented to focus upon the widespread abuse of psychoactive drugs like cannabis, alcohol and tranquilizers. The study has pointed out that all though the drug habit in this country has not yet caused alarm, present trends indicate that it may become a mental health problem in the near future.

Thomas,M.G.: Personality and attitude correlates of drug abuse amongst students of high school in Delhi: A replicated study.
Indian Journal Medical Research 69 (Jun 1969) 990-995.

A study was carried out to determine the pattern and prevalence of drug abuse amongst 3 senior classes of high school students in Delhi (225 students in 1975 and 214 in 1976). The users of drugs were 34.2% and 32.2% respectively. The personality profiles were studied by means of EPI and MPQ - a standardized personality test on the lines of MMPI. In the study of personality profiles, where the scores of the drug users on the EPI were plotted on a graph, there was predominant clustering of drug users in the quadrant delineated by the neuroticism and extroversion dimensions. On MPQ, they peaked on the subscales of mania, anxiety, psychopathic deviate and lie. Students abusing drugs showed a more favorable attitude to drug taking behavior compared to non-users. The study was replicated a year later on the same sample as part of a longitudinal study. The personality profiles as measured by EPI and MPI tended to be consistent in their correlation with drug taking behavior and the attitude towards it, as observed in results.

Tridevi.J.K.,Sethi.B.B.: Drug Abuse in Psychiatric Patients
Indian Journal of Psychiatry (1978) 21, 345-348.

One thousand consecutive newly registered male psychiatric out-patients were studied for pattern of drug abuse. The proportion of drug abuse amongst schizophrenics and neurotics was observed to be between the type of drug abuse and diagnosis was also studied.

Venugopal,M., Chandrasekran,R.: Type of family,Order of Birth and Addictive Habits. Indian Journal Psychological Medicine, July vol 5, (2), 58-60, 1982.

The present study is aimed at understanding the type of family,order of birth and their possible association with different addictive habits like alcohol,tobacco,cannabis and drugs among the psychiatric patients. Out of 456 males who attended the psychiatry O.P.D. JIMPER, Pondichery, during the year 1981, only 97 cases were found to have addictive habits and they constituted

the sample for the present study. The findings were - there was higher representation of addicts from rural areas, middle borns were represented more, married people were more and there was a higher representation from nuclear families.

Verma,S., Panda,K., Garg,D., Munjal,A.,Gupta,K.R., Kumar,A., Singh,S.,Rajiv,G.,Narang,L.: Drug abuse among non-students youth labour.
Indian Journal of Psychiatry (Oct 1987) 29(4)359-362.

257 non-student youth (age range 15-24 years) have been studied on socio-demographic variables, extent and frequency of drug abuse. Non-students are an important segment of the youth population of developing countries and they have been rarely studied. Some information about their problems is clearly needed. Results showed that tobacco was number one drug ever used by this group. Tobacco users were mostly heavy users, while alcohol users were mostly light and moderate users.

Verma,V.K.,Nagpal,S.C.,Dang,R.: Prevention and control of drug abuse in the third world. Indian Journal of Psychiatry (1984),26(2),175-177.

There has been a significant increase globally in the interest in drug abuse and its prevention and control,in which the society has a definite role to play. The legislation to control drug abuse can be considered at the national and international levels. The control of this can be considered at the primary, secondary and tertiary levels. Since drug abuse is a phenomenon which concerns the society at large, doctors and paraprofessionals have a special role to play in it. Prevention is of special relevance to the developing countries. National laws and other social control measures in many countries are not effective as intended, they are just "law of intention" rather than "law of action". There is a considerable need to augment rationality and practicability in drug abuse laws in most countries.

Verma.V.K., Dang Ravinder M.S.: A Study of Attitudes, Perception and Exposure to Drug Use and its relation to Socio-demographic Variables. Indian Journal of Psychiatry (1978) 20, 318-323.

To study the attitudes of students towards drug use, an investigation was conducted on an urban student sample (N-177) at 3 major educational levels in the age range of 10-24 years. A large number of respondents disapproved the use of most of the drugs, perceived availability to be difficult, and intake of drugs involving great risk. They also perceived strong parental disapproval. Relationship with socio-economic variables revealed significant differences in case of sex and educational levels. Females, by and large, gave more favourable responses to drug use variables as compared to males and so did undergraduate college students as compared to school children and post graduates.

Verma.V.K., Gosh.A.: Drug Abuse Amongst College Students Indian Journal of Psychiatry (1977) 19, 1-10.

408 college students were administered a questionnaire consisting of questions related to drug abuse pertaining to 5 drugs. 18.87% admitted having taken the drugs without medical prescription. The users and controls did not differ significantly in regard to age, marital status, background religion, family history of abuse. There were significant differences in sex distribution. Most of the user had already stopped the drug use and only 12 were continuing to be dependent on drugs, mostly on amphetamines and mandrax. Of the users, proportionate number started the drug intake while staying with parents and at hostels. Mandrax and Cannabis were usually taken in company of others, other drugs more when alone. Curiosity was usually given as the reason for having started the use of mandrax and cannabis and to help study or to get through an examination in case of amphetamines.

Verma.V.K. and Dang Ravinder, M.S.: Non-medical Use of Drug Among School and College Students. Indian Journal of Psychiatry(1979)21(1-4)228-234. The youth survey questionnaire duly modified, translated and standardized, was self-administered in class groups to 570 students at 3 major educational levels ie., school, college, and university in the age range of 10-24 years in the urban areas of Chandigarh and Raipur Ram rural field area. The questionnaire was designed to obtain information about socio-demographic characteristics, use of 12 drugs /drug groups and social desirability score. It was found that among students the drugs ever used most commonly were alcohol, tobacco, amphetamines, cannabis, sedatives and tranquilizers. However, a very small number reported current use of drugs other than alcohol and tobacco use was more common in males, at college and university levels and in the urban area of Chandigarh.

Verma, V.K., Malhotra, A., and Dang, R.: An alcohol and drug dependence clinic in north India, initial five years experience. Indian Journal of Clinical Psychology(1985)11:51-61.

The present paper reports on the initial experiences of operating an alcohol and drug dependence clinic in north India. In view of lack of such treatment facilities in the country in general and in this region in particular, an Alcohol and Drug Dependence Clinic (ADDC) was started at the postgraduate Institute of Medical Education and Research, Chandigarh, India in February 1978. There have been 167 patients till the end of 1982. Majority of the cases were males, married, above 20 years of age and came from urban background. All educational levels and occupational categories were equitably represented. In terms of characteristic of the user and response to treatment, the patients could be divided into three broad categories, those dependent on alcohol, on crude opium and on morphine with or without other drugs. Those dependent on alcohol were more highly educated and came from urban and higher income groups; whereas those using crude opium were less educated, were more often sikhs and came from lower income, rural background. All conventional treatment modalities were used; however, non-medical professionals played a key role in supportive psychotherapy which was largely used. In comparison to the western literature, the treatment outcome has been especially encouraging, particularly so in crude opium users and to a somewhat lesser extent in problem drinkers.

